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# INTERNATIONAL ABSTRACT OF SURGERY

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## MONTHLY COLLECTIVE REVIEW

### PHYSIOLOGY OF INTERNAL SECRETIONS OF THE OVARY

By CAREY CULBERTSON M. D. CHICAGO

IN the scope of this review it is proposed to include only the most recent literature, valuable collaborations having been offered on this or closely allied subjects by Bell McIlroy Graves and others within a relatively short time. While harmony and efficiency on the part of the entire endocrinous system is essential to the functional activity of the female genitalia at puberty granted that these organs are normal at birth and it is therefore difficult to consider any part of this system as an entity yet consideration is contemplated at this time only of the internal secretions of the ovary with special reference, at that, to the function of the corpus luteum.

To-day from a purely physiological point of view the ovary has come to be regarded as having three constituent activities those of the graafian follicle the corpus luteum and the interstitial cells. Regarding the first two nothing need be said in an academic way. Of the last, the importance of the interstitial cells has more recently come to be recognized. These are distinguished from the stroma cells by their larger size and rounder outline with oval nuclei. They increase during pregnancy and are probably most marked between infancy and puberty. That these cells possess a function is fairly well established by McIlroy and Limon who found that their presence in grafts was sufficient for maintaining uterine nourishment. Also when one ovary is removed and compensatory hypertrophy has occurred in the other the interstitial cells are found to be increased correspondingly both in size and number. It is most probable that

the secretion from these cells acts independently of the follicles and corpora lutea and is not antagonistic to them. Without definite knowledge it is assumed that these cells control the nutrition of the genital organs and breasts during their active development and that it is the loss of their secretion a true hormone, that brings about uterine atrophy after complete oophorectomy. According to Bell as far as the general metabolism goes the total ovarian secretion seems to promote the excretion of calcium and the retention of phosphorus but he does not attribute this function to the interstitial cells alone. On the other hand no other investigators refer this feature to either the follicle or corpus luteum. Nevertheless in one of McIlroy's experiments calcium elimination was increased after castration and diminished again after giving corpus luteum extract. The influence of the ovary on sugar metabolism is another point in evidence rather of our lack of knowledge regarding correlation on the part of the ductless glands. Thus Seltz concludes that the thyroid hypophysis, and chromaffin system increase sugar metabolism and that the pancreas, ovary and parathyroids tend to check it. In an elaborate series of experiments Stolper regards it as probable that increased sugar assimilation means increased ovarian sufficiency. He found sugar assimilation reduced in castrated animals and in 38 women from whom both ovaries had been removed. He admits that the process is very complex results being due in part to the effect on the pancreas and adrenals, glands evidently closely associated with the ovary. In partial resection of the pancreas as carried out



on dogs sugar assimilation was decreased and then compensated for to a certain degree only by feeding ovarian substance. When however the ovary was removed in addition to pancreatic resection a further reduction in sugar metabolism was observed. Stolper more recently is of the opinion that absence of ovarian function produces the decrease in sugar tolerance by its influence on the pancreas and adrenals. Hence, what is most probable total ovarian insufficiency arouses increased activity on the part of most if not all of the other ductless glands. With our present knowledge this influence is most difficult to measure and the part which the interstitial cells perform in maintaining the balance of power throughout the endocrinous system is but problematical.

#### SECONDARY SEXUAL CHARACTERISTICS

One of the most desirable results of perfect correlation on the part of these ductless glands is the production of the so-called secondary sexual characteristics occurring in both sexes at puberty. The conviction is rapidly growing that these secondary sex characteristics are due to the influence of genital hormones, arising from the ovary and testicle respectively. Past experimentation has shown the influence on the general system of castration in either sex before puberty and after and these changes are too well known to require review at this time. A new phase was given to this question in 1912 by Steinich who transplanted sex glands in young castrated animals of opposite sex. This resulted in completely checking and even reversing the physical features and traits recognized as characteristic of and specific for each sex. More recently the same investigator has succeeded in producing entirely similar changes in adult animals who had developed sex characteristics before castration thus demonstrating that sex is not fundamentally determined in advance. The only conclusion possible is that the essential factors for the production of the genital hormones are the interstitial cells found in the genital glands of both sexes.

#### THE CORPUS LUTEUM AS A GLAND

While Born was the first to propose that the corpus luteum should be regarded as a gland of internal secretion with particular respect to the implantation and development of the fertilized ovum it has remained for Fränkel, Magnus and Cohn to prove experimentally Born's theory. The original work of Fränkel is now well known that the removal of the corpus luteum prevented pregnancy or caused the disappearance of the ovum in the early months but that it had no in-

fluence on pregnancy later. Weymersch had added to this the explanation that destruction of the corpus luteum is followed by constriction of the uterine blood vessels and by uterine contractions thus inhibiting circulation of the blood freely throughout the organ. While most clinicians have observed that these laws cannot apply strictly to the human female it has remained for Cathala to analyze a series of cases. As a result he concludes that the corpus luteum is not indispensable and that its removal in the early months is not to be considered as a cause for abortion. Puech and Vanverts take issue with him in part however showing that abortion is more frequent during the first two months of pregnancy—25 per cent—than during the third—11 per cent—or fourth—12 per cent—after double ovariectomy. They also show that abortion follows oftener after bilateral oophorectomy—25 per cent—than after unilateral—16.5 per cent—when the operation is performed during the first two months of gestation.

An interesting point in the study of the corpus luteum has been added by Escher who isolated the pigment of the body from the ovaries of cows. He found that it belongs to the lutein group of hydrocarbons and that it is not different in any respect from the vegetable carotin, a pigment of certain vegetables and green leaves. Its origin and function are uncertain except that it has nothing in common with hematin or bilirubin.

The nature of this ovarian secretion has recently been carried a step further by Iscovesco. This investigator undertook his problem on the basis that all living cells are formed of proteins, carbohydrates and lipoids. Among the lipoids are found neutral fats, lipid both phosphated and non phosphated. The lipid responds chemically in all respects the same as the internal secretions. Thus the thyroid possesses an entire series of lipid. Iscovesco worked with one of the lipoids of the ovary soluble in oils in all neutral fats forming liquid with ether in petrol acetone chloroform benzol and boiling alcohol. This fatty solution injected into rabbits, produced uterine and ovarian hypertrophy with marked congestion and extravasations in extreme doses. A similar lipid from the testicle exerted corresponding changes in the male. Again a specific lipid from the corpus luteum increased post partum involution and lessened nausea and vomiting. There seems to be a direct antagonism between the lipoids of the corpus luteum and those of the suprarenals. Iscovesco has come to the conclusion that in every organ of vertebrates may be found a specific lipid which has the property

of exciting the function of that organ each one being a homostimulant acting on the medullary center which presides over that particular organ.

Aschner previously and Herrmann more recently have arrived at similarly suggestive results their work varying only in regard to method. Aschner in substantiation of Frankel's theory of the relation of the corpus luteum to pregnancy also produced a lipid specific in action. Employing a subcutaneous injection of ovarian extract and placental extract to produce milk secretion he noted the hyperæmia of the genitalia and was able to produce hæmorrhage even hæmatomata in the uterine mucous membrane of guinea pigs. The ovaries were found to contain an unusual number of ripening follicles to which Aschner attributed the genital hyperæmia. Herrmann isolated a pentamindiphosphatid from the corpus luteum of rabbits. An extract of this substance injected into the animal brought about hypertrophy of the genital organs and breasts. Histologically there appeared a marked hypertrophy of the muscularis and mucous membrane. In one animal so tested before maturity where the uterus was undeveloped a hyperæmia and œdema of the stroma took place similar to the changes of secretory activity. Corresponding hypertrophy and hyperplasia were found in the mammary acini the ovaries became enlarged and a ripening follicle was found. In the case of mature rabbits Herrmann was able to induce oestrus by injection of the phosphatid changing the four weekly cycle to a two weekly one in three different animals. Again in an immature animal the ovaries were removed and the phosphatid again injected over a period of five weeks. The same changes were again produced, thus more than overcoming the castration atrophy.

In like manner Stickel's experiments demonstrated that ovarian extract and particularly the extract made from the corpus luteum has the most pronounced effect on the uterus. To produce sterility he subjected a series of rabbits to the X ray and found that in them the uterine curve was similar to that in virgin animals the uterine response to the extract being less marked after raying. Ovarian extract from rabbits that have been rayed possesses an especially active influence on the uterus of other rabbits similarly rendered sterile. Spontaneous uterine contractions are nearly always present in rabbits that have delivered young and Stickel suggests that the ovarian hormone is antagonistic to whatever other influence may inhibit such uterine contractions.

Similar results to these have been reported by Fellner who used alcohol ether extracts not only of the ovary but of early chorionic villi. The most characteristic results were obtained when these extracts came from pregnant animals. When the ovaries contained no corpora lutea results were negative. Though Fellner was unable to decide as to whether or not he was dealing with an internal secretion in his placental extract his results so closely resemble Herrmann's as to suggest again a powerful phosphatid. Halban regards their combined results as further evidence in support of his theory that the placenta takes over in large part the function of the ovary.

Experiments to detect an antibody in the blood serum of women was undertaken by Smith as a result of which he concludes that the term in internal secretion need not necessarily imply such a substance as would produce an antibody. Using an extract of corpus luteum as antigen he attempted to detect the presence of an internal secretion by the complement-deviation test but with negative results. Keller also found it impossible to test the function of the ovary by producing a reaction to injections of adrenalin, atropine or pilocarpine. His experiments in twenty cases where the ovaries were absent or not functioning were based on the idea of the ovary possessing an inhibitory influence on the chromaffin system as demonstrated by Christofolletti and Adler but the results were almost uniformly negative.

#### THE CORPUS LUTEUM AND MENSTRUATION

With respect to the corpus luteum during menstruation experimental results are less satisfactory. Schroder made comparative observations on the endometrium and corpus luteum in 100 cases, in 69 of which menstruation was regular being irregular in 11 with conformity however to the corpus luteum cycle. His work is interesting and presents a four stage cycle.

1. Fifteen to twenty days after the beginning of menstruation the endometrium shows the characteristics of the middle or end of the interval. The corpus luteum is then going through the first stages of its development. The granulosa cells are small but gradually increasing in size with abundant red blood cells between. The limiting fibrous membrane shows some unraveling with an arrangement of the finest fibrils in a radial direction. Capillaries are beginning to form as are the theca cells in characteristic concentrically arranged fields.

2. From 18 to 25 days the endometrium shows the beginning to the middle of the premenstrual

stage The corpus luteum is mature with large-celled convoluted granulosa many fine fibrils and capillaries running in radial direction There is a thin but clearly defined internal connective-tissue boundary and a clearly marked small-celled peripheral theca interna

3 From 24 to 28 days, the endometrium is at the end of the premenstruum anatomical menstruation The corpus luteum is fully developed and organized Granulosa cells are similar to those in (2) but the radial and transverse fibrils are more abundant surrounding each cell with a fine network The internal connective-tissue boundary is very well developed with well marked fields of small theca cells

4 One to 14 days The endometrium is at the post-menstrual interval the corpus luteum being also in retrogression The granulosa cells are shriveled bursted by the continuously increasing growth of the fibrils The internal connective-tissue layer is thicker and nuclear organization has occurred The cells of the theca interna are clear and well developed

Schröder therefore concludes that the ripened follicle ruptures on the fourteenth to sixteenth day from the beginning of menstrual bleeding and that the rapidly developing corpus luteum normally matures at the time of the premenstrual swelling of the uterine mucosa and that it is the cause of this change

Meyer and Ruge on the other hand have attempted to establish a five-stage normal sequence for the corpus luteum (1) The hyperæmic stage during the menstrual interval (2) The stage of vascularization early in the premenstrual congestion of the uterine mucosa (3) The hemorrhagic stage during the marked premenstrual phase (4) The height of hemorrhagic infiltration of both corpus luteum and mucous membrane just before or at the beginning of menstruation (5) Regression during and after menstruation During pregnancy the corpus luteum remains at the high point of its hemorrhagic stage

Without going so deeply into the histologic changes occurring in the ovary synchronously with the menstrual cycle Fränkel regards ovulation as regularly occurring during the intermenstruum claiming that the exact age of the corpus luteum cannot be determined microscopically His opinions have been confirmed by Miller Seitz Landsberg Meyer and Schröder Miller regards menstruation as a mere retrogressive process after a hyperæmia of the uterus preparatory for pregnancy Incidentally he claims that there is no such thing as post menstrual embedding but that the ovum corresponding to the first sup-

pressed menstruation is the one fertilized and implanted

While Meyer and Ruge are not so far from Schröder in their estimation of the relation borne by the corpus luteum to menstruation Halban has brought to bear on the question the light of his clinical experience In the course of thirty five laparotomies the ovary was deprived of its yellow body and careful notation made with respect to subsequent menstruation It was found that where this procedure was undertaken at once after menstruation there was no change in the menstrual order Where however the corpus luteum was destroyed during the second half of the interval menstruation occurred one or two days after the operation the next period following in four weeks thus establishing a new time for the cycle Thus the corpus luteum must be regarded as inhibiting the onset of the next menstrual period as it apparently does by persisting in pregnancy Its influence as the factor determining the uterine changes of menstruation seems to be fairly well established Dannreuther's case provides further evidence to the point Here corpus luteum extract was administered to a patient after bilateral salpingo-oophorectomy with a re-establishment of menstruation The extract was made from the ovaries of pregnant animals an essential factor for securing most certain results in Dannreuther's opinion Thus the corpus luteum becomes the source of the hormone governing such changes as are essential in preparing the mucous membrane for the reception of the fertilized ovum, the premenstrual changes In what way it maintains itself in case pregnancy takes place or through what agency it is maintained is not yet clear Evidently here the activity of other internal secretions come into play either those of glands already active or some new substance introduced by new tissues such as for instance the chorionic trophoblast.

#### OVARIAN AND UTERINE EXTRACTS AND THE BLOOD

Granting then an influence on the part of the corpus luteum over menstruation the next thought is that ovarian hyperfunction might serve etiologically in excessive uterine bleeding or that a definitely abnormal uterine mucous membrane might react to the stimulating hormone The work of Hirschmann and Adler has finally given us a knowledge concerning the cyclic changes in the uterus characterizing menstruation but the physiology of this series of phenomena remains far from certain The pathology behind many forms of uterine hemorrhage is well under

stood but the theories explaining certain menorrhagia and metrorrhagia as due to glandular endometritis metritis cystic degeneration of the ovaries chronic oophoritis etc as pointed out by Savary have been given up. On the hypothesis that menstruation is not a function but a mere retrogressive change following activation on the part of the uterine mucosa by a corpus luteum hormone implantation of a fertilized ovum not having occurred uterine hemorrhage may be studied from the point of view of ovarian physiology. This leads then to a study of the relation between ovarian and uterine extracts and the blood.

Schichele's experiments have been most interesting. Combinations of animal blood serum and plasma were added to extract of different portions of the uterus and ovaries. Such extracts delayed coagulation varying in degree according to abnormal bleeding producing a more marked reaction than the endometrium being more powerful than the myometrium and a uterine extract causing less delay except in cases where there had been excessive bleeding. His extracts further produced a histatinospasmodic blood vessel thus lowering blood pressure. This would agree with Herrmann's finding that extract of corpus luteum does not raise the blood pressure (well known fact) irregularity following organic extracts from the uterine placenta and ovum. He attributes this to the melenkine which together with another uterine vasodilator is recovered from the juices of the uterus. If vasodilator be removed or if it be lacking coagulation occurs more quickly than when it is present. Klatz isolated a peculiar substance from the corpus luteum taken particular pains to exclude other portions of the ovary. Human blood tested with this extract coagulated very rapidly. He believes that during normal menstruation this vasodilator is freed by luteal cells freed when the granulosa follicle ruptures the uterine then entering the bloodstream and being absorbed out of circulation.

While these experiments are to be regarded with caution a preliminary conclusion is that the ovaries probably are not far separated from the uterus in function and that a causal relationship of the blood vessel regulating mechanism exists for a short time. Such a mechanism would have in mind the uterus where it is due to sexual stimulation. He treats the uterus of the tumor growth itself a product of a perfected or an secretion

(dysfunction) and peaks of a myomorphone as the factor in celebrities in whom sexual energy while still active find a normal expression in tumor development. In multipara this is expressed by a relative sterility. Metrorrhagias of the menopause with no apparent uterine lesion are regarded by Lorange and Macaluso as essential metrorrhagia due to a disturbance of the ovarian hormone which normally presides over menstruation. In these cases bleeding occurs if the ovaries are removed and the majority of such ovaries are subject to cystic degeneration. Their opinion is that in neurotic ovaries an overproduction of the interstitial cell takes place with hypertrophy of the gland of internal secretion. This in turn may be the result of a general failure to correlate on the part of the vascular gland pressing over the development and uppression of menstruation. The theory that metrorrhagia of this type or hemorrhage from myomata is due to ovarian hyperfunction is strongly supported by the beneficial results of the X-ray as reported by Kronhagen, Frankel and many other clinicians. Decreased bleeding or amenorrhea follows the destructive effect of the ray on the ovarian parenchyma with secondary atrophy of the uterus. How much of this influence is due to direct action of the X-ray on the uterus is not clear but the changes in the ovary seem to be definite at least for a time.

A different application of a somewhat similar theory led Kalliedy to treat cases of hysterorrhea and of uterine hemorrhage with extract of corpus luteum. All of his cases were symptomatically cured and six of the sterile women became pregnant. Ovarian hyperfunction is the explanation here offered uterine insufficiency being due to correlative disturbances in the organ of internal secretion. Naturally the questions left open as to whether results obtained were brought about directly by the hormones used or by the hormones released through stimulation from the injected material.

#### THE CORPUS LUTEUM AND PREGNANCY

The possibility of the fetal corpus luteum pregnancy for all women chemically is a late arising ovarian internal secretion which already begins to develop even before fertilization of the egg. It is in the corpus luteum that different chemical and biological processes are taking place. It is the source of the further development of the embryo and the source of the internal secretion of the uterus and the source of the internal secretion of the ovary. It is the source of the internal secretion of the ovary.

influence which in some way or other determines the occurrence of protoplasmic changes in the cells characteristic of decidual formation. Thus he takes issue directly with those investigators who have heretofore upheld the theory that decidual formation is due to some so-called genetic influence having its origin in the ovary. Accepting this attractive idea we are at once led to regard the rapidly proliferating ectodermal cell as providing an internal secretion capable of activating further a cell already influenced to moderate excreta by the corpus luteum lipid or phosphatid. Such a theory makes the early villi for the time being complementary to the corpus luteum and sustains Halban's proposition that the placenta takes over in some degree the ovarian function. Carrying the idea one step further it is presumable that the corpus luteum itself is maintained as a permanent anatomic entity having a definite physiologic function during pregnancy through the influence of this very same placental cell product. This theory of course leaves out of consideration the influence of the other glands of internal secretion.

It is the belief of Seitz that the function of the corpus luteum is short lived lasting only during the first month of pregnancy the interstitial ovarian cells then developing and working synergetically with the yellow body. Irregular growth and development then on the part of the corpus luteum may explain habitual abortion. Likewise destruction of the corpus luteum early in pregnancy in the lower animals as shown by Frankel will lead to abortion. On the contrary destruction of the chorionic villi by termination of pregnancy may be the factor permitting regression of the corpus luteum with recurrent ovulation and menstruation. At all events Seitz believes that the changes of the ovarian interstitial cells in pregnancy are stimulated by the placental cell change. He further claims that a pathologic overgrowth of trophoblast as in vesicular mole or chorioepithelioma leads to the production of the lutein cyst.

Keller's observations from a series of operations performed during pregnancy assured him that a succession of special changes occur in the ovary such as marked vascularization, growth of theca-lutein cells, the construction of the corpus luteum and the development of interstitial cells, changes evidently significant of special function. He found no recent corpora lutea in the second half of gestation, nor one that appeared to be in retrogression. No follicle beyond the stage of ripening was found, nor on the point of rupture. That ovulation may occur during pregnancy is

most improbable though follicles may ripen and even escape. While considering the physiology of the corpus luteum during pregnancy the possibility of a dysfunction again comes to mind. It has been suggested that since ovulation does not occur the ovary subsides into what should correspond to a resting stage. This does not seem to be in accordance with the evidence. Not only are the interstitial cells more in evidence but the corpus luteum becomes for the time being a permanent structure. Whatever changes in general metabolism occur when this body fails to be maintained has not been determined but certain investigators have ascribed to its insufficiency some of the pregnancy complications of the early months such as pernicious anemia, hyperemesis, etc. Thus Churea and Stolper believe that such a relation exists. Without formulating definite conclusions, Churea assumes that one of the functions of the corpus luteum is to antagonize the toxin elaborated by the chorionic villi and that lutein deficiency therefore permits the placental cell products to become assertive. He reports one case of excessive emesis in which death ensued. Autopsy revealed considerable enlargement of the right ovary which contained a large yellow body in a state of cystic degeneration. The left ovary was small but cystic, the uterus and placenta negative. As a result of the cystic distention and increase in connective tissue the lutein cell band was markedly atrophic. Churea has used tablets of lutein in treating his cases of emesis but results have varied. Recasens calls attention to the fact that functional disturbance in the early weeks of gestation is radically different from the pathological processes of the ultimate months. Stolper notes this as well and both regard lutein hypofunction as at least one factor in hyperemesis gravidarum. In early gestation the entrance of albuminoids from the ovum into the maternal organism causes disturbances which are signs of immunity with subsequent formation of antibodies. These activate the functions of the various permanent glands and the temporary corpus luteum. If injury to the cell structure is effected adding to the activity of albumin products from the ovum these signs of immunity in the early months may go on to the development of a toxæmia such as incoercible vomiting. Finally Sergeant and Liao regard the cortical layer of the suprarenal capsules as one of the lines of defense for the female organism in gestation which neutralizes the auto-intoxication of the early months called by them *villo toxæmia*. Often this is so severe that the suprarenal capsules give out and fail in their function.

## OVARIAN EXTRACT IN THERAPY

While our knowledge of ovarian physiology is thus far very imperfect, efforts at some therapeutic application of the ovarian secretions have been reported for many years and until recently with most indifferent success. When thyroid extract came to be used successfully in certain types of hypothyroidism, clinicians made haste to apply the same empiricism in the use of ovarian extract but with disappointing results. Only from the most recent studies in ovarian physiology such as have just been reviewed, have we begun to find some explanation for this apparent inconsistency. The thyroid gland evidently produces its hormones more or less constantly that is the active principle is probably present in its tissues at all times so that by feeding the gland either fresh or in extract its organic influence is transmitted. In the ovary conditions are quite different. It is most probable that the interstitial cells are enlarged only at certain times if indeed this means that they are actively engaged in the production of a secretion. With the follicle and corpus luteum we have a definite recurrent growth and regression wherefore any secretion coming from them would be present only on occasion. Thus it is evident that any internal secretions from the ovary would be obtained in extract only provided that the organ was actively functioning at the time the extract was prepared. Again if it is the purpose of the interstitial cell to guard the growth and development of the uterus it is clear that they would be most active during the age of puberty and less so after nubility. They have however been observed later in life and often during pregnancy hence their function is probably more complex. As regards the follicle if it is the function of the internal theca cells to produce the menstrual congestion and of the lutein cells as successors to maintain this influence in preventing further ovulation and in allowing the newly implanted ovum at least for a month or two then it is more probable that the follicle could be collected in extract for but a few days at a time in case gestation does not take place. This explains at least how difficult it may be to secure activating ovarian extract for commercial purposes and therefore why therapeutic results from past clinical experiments have been so varied and uncertain. It is probably for these reasons that Dannreuther considers the corpus luteum of pregnancy as more valuable and efficient than that of ovulation and hence while agreeing with Burnham as to its therapeutic value emphasizes the importance of preparing the extract from the ovaries of pregnant animals

only. He regards such an extract administered by mouth as non-toxic but warns that the blood pressure be not allowed to fall below 90 mm Hg under any circumstances and not more than 15 mm Hg at any one time. Aschner believes that such an extract brings about a hyperemia of the genitalia and suggests its use in the treatment of amenorrhea, sterility and menopause troubles. As a result of his experiments with the phosphatized lipid (ovarian) previously referred to, Iscovesco assigns to it great influence in certain hemorrhages, amenorrhea, dysmenorrhea, hypoovarianism, sterilization and the menopause. He also suggests that the deficiency of this influence is a factor in the chlorosis of puberty and in the feebleness of senility. According to Dannreuther corpus luteum of pregnancy is indicated in (1) functional amenorrhea or scanty menstruation, (2) dysmenorrhea of ovarian origin, (3) manifestations of physiologic or artificial menopause, (4) neurasthenic symptoms during menstrual life, (5) sterility not due to pyogenic infection or mechanical obstruction, (6) ovarian insufficiency where the function of one ovary is impaired or one has been removed and compensatory activity in the other has not taken place, (7) repeated abortions not due to disease or mechanical factors, (8) hyperemesis in the early months of pregnancy. Hill's clinical experience is in accordance with such indications. He treated with the extract of corpus luteum 12 patients from 25 to 38 years of age, all of whom had lost both ovaries by operation and showed severe types of nervous disorder. In every case improvement occurred though complete relief was experienced in but two cases and relapses occurred where treatment ceased. He agrees with Burnham and Dannreuther that insufficient dosage explains past failures.

In certain types of sterility where alterations of the ovary are present, Reynolds finds a slight or moderate organic enlargement due to retention cysts or to unduly large persistent and frequently cystic corpora lutea. In such cases extract of corpora lutea would be contra-indicated and in these Reynolds advocates resection of the retention cysts or persistent yellow bodies.

Osteomalacia is always to be considered in discussing ovarian physiology or pathology. Seitz does not regard physiological osteomalacia as proven though acknowledging that bone metabolism is decreased through the ovarian influence. Schnell has reviewed the treatment of osteomalacia during the last fifteen years. He does not regard this condition as an expression of hyperovarianism but thinks that it is due rather

to changes in metabolism from the action of various ductless glands. Three hundred and thirty four cases were collected. Of these 37 were treated by phosphorus 105 by castration 36 by adrenalin 1 by antithyroidin 16 by pituitrin 2 by milk from castrated goats, and 6 by the X ray. With but 7 recurrences in the series treated by oophorectomy. Schnell claims that this operation still offers the fewest bad results, being much preferred to treatment by hormones, such as adrenalin and pituitrin.

On the other hand a case of acromegaly is reported by Kalledey and another by Goldstein which seem to have been due to a lack of ovarian secretion whereby the hypophyseal secretion failed to be neutralized and flooded the general organism. Goldstein's case is that of a woman of 38 with a tendency towards gigantism in childhood. She was subjected to panhysterectomy for uterine myomata and acromegaly developed without recognizable enlargement of the hypophysis. Kalledey's case is of even greater interest. The patient was 32 years of age and had shown acromegalic disturbances for four years. She menstruated first at 17 scantily married at 22 and passed into menopause at 24 without gestation having occurred. At 28 atavistic symptoms appeared with enlargement of the feet. She became very fat developed headaches, sleeplessness, and vertigo and later was unable to walk. Her general appearance was masculine even to a growth of hair on the face. Intravenous injections of ovarian extract were administered and she became able to walk after the sixteenth dose. She was then given the extract in tablet form. Menstruation returned in three months and one month later she became pregnant.

#### OVARIAN GRAFTING

Determination as to the conditions under which the interstitial cells or the follicles predominate in influence will aid in explaining success or failure in ovarian grafting. All such efforts are as yet at the experimental stage, no recent work having brought forth any definite working knowledge. Indeed opinion continues to be divided as to whether the ovarian hormone is in itself the essential factor in maintaining normal conditions or whether its value lies merely in its power to induce menstruation. Thus Tuffier regards menstrual suppression as the cause of trouble in post-operative menopause rather than the loss of the ovarian secretion *per se* whereas Whitehouse regards his results from autoplasmic grafts after total hysterectomy as satisfactory. J. T. Smith believes the essential factor in the success

of the transplant is ovulation that is the production of a corpus luteum. Ovarian transplants containing luteal tissue acted almost as well in his series as where the nerve connection remained intact. Graves reports on 25 cases where the ovary was implanted in the broad ligament or abdominal wall with end results in 12 7 suffered severely from hot flashes 2 lightly 3 not at all. One patient bled from the nose and rectum and twice the transplant became cystic and painful. In its present development Graves does not regard ovarian transplantation as of great practical value. An opinion concurred in by Bell and Park. Bell speaks of this procedure as an effort only towards mitigating menopausal disturbances the severity of which depend not so much on ovarian insufficiency as on the correlation existing between all the internal secretions. Here the uterine changes which prevent menstruation and the individual variability as to sexuality and to the stability of and capacity for readjustment in the endocrinous system must be given proper consideration.

Tuffier's autografts comprise 44 cases. The ovary was implanted in the loose subperitoneal cellular tissue one on each side 5 or 6 cm distant from the median incision. Even where the ovary was "cystic" he used it. Of this series 19 were seen later 18 of the patients having menstruated. Amenorrhoea ensued for from three to seven months after operation during which time menopause symptoms were present. With the recurrence of menstruation the unfortunate phenomena leave. Wherefore Tuffier argues that menstruation is more important for the physiologic equilibrium than is ovulation. Such argument is of course beside the mark until we can prove more definitely the nature of the relation between menstruation and the ovarian hormone.

Two of Tuffier's cases were of unusual interest. The grafts were removed after three and one-half years for pain. They had maintained their original size and a voluminous arterial and venous arrangement could be demonstrated about the periphery. Of 14 cases, however but 3 menstruated regularly and rhythmically 2 regularly but too freely and 4 irregularly. Three showed a progressive decrease extending over a period of two years time and four suffered from pain either in the graft or in the uterus. Tuffier concludes therefore that autotransplants are most effective in young women especially if hyperthyroidism is present. The experiments of Curtis and Dick gave equally unsatisfactory results but 2 autografts and 1 homotransplant proving successful out of 13 attempts.





enlarged thyroid Here again gestation came on after several months of thyroid feeding In each case medication was stopped as soon as menstruation ceased.

This complementary association of the ovary and thyroid is again demonstrated in Basedow's disease Graff and Novak's recent series of 36 cases and Frankel's of 40 are significant. Of Graff and Novak's cases a marked diminution in genital function was observed in 18 primary ovarian deficiency evident in 10 dysmenorrhoea in 6 sterility in 7 where pregnancy was possible Four women showed definite infantilism and in 10 others stigmata of hypoplasia were present No change in the genital function was seen in 12 patients, 1 became pregnant and grew worse and 2 recovered spontaneously in the second half of gestation Frankel found that in 8 of his cases the disease came on after the fortieth year 6 after 50 and 5 during the menopause Amenorrhoea was the rule in advanced disease. He regards the hypo-ovarianism of puberty pregnancy lactation and the climacteric as peculiarly predisposing to *morbus Basedowii*.

Thompson thinks that it is the interstitial cell secretion rather than that of the follicle which has most influence on the thyroid and he quotes Crile as having emphasized the relation between exophthalmic goiter and sexual neurasthenia. The thyroid becomes definitely hyperæmic and hypertrophic during pregnancy and its function is accordingly increased Bell argues that such changes would naturally occur if the interstitial ovarian secretion were absent during gestation thus throwing a tremendous strain on the other organs of internal secretion especially the thyroid and hypophysis This increased thyroid activity seems to take the form of a storage of colloid On the other hand neither metabolically nor actually has clinical experience or experimental research produced any conclusive evidence that thyroid insufficiency in pregnancy is the cause of eclampsia On the contrary hypo-ovarianism in gestation produces less effect in late pregnancy than in the non pregnant a condition due either to the stimulation of the inactive thyroid by gestation or to the secretion of the developing foetal thyroid being conveyed to the mother As regards the etiology of eclampsia indeed most recent study seems to la or the idea that this lies in the metabolism of the placenta

#### THE HYPOPHYSIS

No work on the physiology of the glands of internal secretion has created more interest than

that in connection with the hypophysis By this time the physiologic action of pituitrin as a stimulant of uterine contractions and its therapeutic value in delayed labor or in obstetric hemorrhage are so well established that no consideration of this phase of the subject will be carried out at this time It is desirable to include in this present résumé only such material as refers to the hypophysis in its relation to the ovarian secretion Here again we find amenorrhoea a clinical expression when the pituitary gland is deficient. Hofstätter and Fromme have most recently contributed to this phase of the topic. In patients where amenorrhoea has existed for a long time without pregnancy as in primary hypoplasia of the uterus or ovaries or in general infantilism anæmia and cachexia a disturbance of the glands of internal secretion seems the most probable factor While it does not necessarily follow that the hypophysis is insufficient in every case it would appear that either such is the circumstance or else the addition of pituitary extract stimulates those glands which are at fault or which under such stimulation are able to improve conditions At all events Fromme treated 12 cases by daily injection of 1 ccm of pituitrin 5 proved negative 2 doubtful while 5 reacted promptly His best results were obtained with those patients where adiposity co-existed patients in whom disturbance in the internal secretions is most apt to occur In some of Hofstätter's cases the amenorrhoea had not existed so long as in uterine atrophy of lactation and where mild adnexal disease seemed to be the only pathological finding Thirty three cases were treated by hypophyseal extract of which 22 responded after several injections by uterine bleeding very like menstruation Continued injections or the use of tablets kept up the periods in 11 cases and even where amenorrhoea persisted the patients were symptomatically improved This phenomenon was noted particularly in cases following castration and the menopause Like Bell Hofstätter has combined pituitrin with thyroid extract especially in adiposity and Bell has used it with ovarian extract also A point of practical value clinically is the condition of the skin Where this is dry and rough the thyroid is most probably at fault but if fine and smooth the pituitary is more apt to be insufficient

Achner and Seitz regard the hypophysis as absolutely necessary for the existence of pregnancy and Bell claims never to have met with gestation in which the woman suffered from a major degree of pituitary insufficiency While Bell insists on the unity of the whole gland

Schlumpert and Siguret claim proof that the anterior lobe is uninfluenced by pregnancy and that the active secretion is obtained only from the posterior lobe a conclusion which is certainly generally accepted. By its vasoconstrictor action Schlumpert has demonstrated pituitary presence in the foetal calf as early as the tenth week and in the human embryo at the sixth month. In foetal calves in the seventh month its influence on the respiratory center has been determined. But while hypophyseal insufficiency tends toward amenorrhoea and sterility excessive secretion has a similar influence. Thus hyperpituitarism results in acromegaly an expression of masculinity hence decreased sexuality in the female which may be spasmodic or constant. Cushing has shown that acromegaly eventually produces dystrophia adiposogenitalis or pituitary insufficiency hence again amenorrhoea and sterility in the female.

That the relations between the hypophysis and the genitalia are in some respects antagonistic is claimed by Rosle. After castration this is not so evident where advanced age cachexia and similar factors enter in. Thus at the normal climacteric the hypophyseal influence does not become marked. But in young women he finds reaction evident in a very short time after removal of the ovaries or of the entire pelvic viscera even in the presence of severe general disease. This is shown histologically by a hyperplasia of the eosinophile and especially of the basophilic cell. The latter appear abundantly in those areas of the hypophysis where normally but few are found. That such cellular increase is responsible for increased secretion and hence for some part of the internal secretory disturbance characterizing the exaggerated symptoms of premature menopause remains uncertain. That such may be the explanation however is suggested by Neemann's experiments with castrated animals. After removal of the ovaries or testicles or merely of the corpora lutea he injected animal with extract of the hypophysis. The effect was the same in one series of animals as in a series of control. When however the extract was taken from the hypophysis of a pregnant animal the effect differed materially. In some there was a dilating action on the vessels and in others a constricting effect altogether contradictory. This may explain many of the failures reported in the therapeutic use of pituitary extract and it may also be construed as at least partially clearing up certain phases of the vasomotor disturbances at the climacteric.

The abnormally large excretion of calcium

salts as a result of hyperovarianism has led in past years to treating osteomalacia by oophorectomy. Bossi has more recently suggested that these patients be fed suprarenal extract instead. While physiological osteomalacia has not been proven bone metabolism is increased by the hypophysis, the thyroid, the thymus and probably the parathyroids. Further it is quite possible that in osteomalacia there is a deficiency in these glands and in the adrenal as well as an excess of ovarian secretion. Thus we are face to face with a definite and logical therapeutic advance to be followed in the future in all those diseases of the endocrinous glands where there is excessive secretion. Instead of removing portions of diseased or deficient organs Bell now suggests the use of metabolically antagonistic extracts. Pituitrin may prove to be as efficient in the treatment of hyperthyroidism as it is in uterine inertia in labor and combined with suprarenal extract it may serve to counterbalance the action of the ovaries and thyroid leading to calcium retention.

#### THE ADRENALS

The relation of the adrenal gland to the gonads is as yet very imperfectly understood. Addison's disease remains the only clinical recognition of suprarenal insufficiency characterized in the female by amenorrhoea. Yet as has been suggested a similar expression may exist in osteomalacia. It is quite within the bounds of reason therefore to regard the suprarenals as of great importance during pregnancy in assisting the absorption and retention of lime. The amenorrhoea in Addison's disease is apparently due to uterine atrophy. Novak has recently shown a genital hypoplasia in rats following extirpation of the adrenal more pronounced in younger than in older animals. Partial extirpation caused no change. Potency and capacity for conception was markedly decreased though pregnancy was not necessarily interrupted. Seitz on the contrary considers that the adrenal is as essential for conception, pregnancy and uterine contraction as is the pituitary, though an increased amount of adrenalin in the blood in pregnancy has not been demonstrated. In unilateral removal of the suprarenals in rabbits Bell found that calcium secretion was increased many times, that of urea and phosphorus in less degree with no histologic changes in the ovaries. The pituitary appeared to be affected in the rapid production of infundibulin.

In excess of suprarenal secretion amenorrhoea is a constant finding and pregnancy occurs in no well-defined case. In suprarenal cortical hyper-

plasma secondary sexual characteristics are always modified in some degree a case of Benda's just reported being quite to the point. The ovarian influence is largely overthrown by such hyperplasia secondary male characteristics being produced where the external genitalia remain those of the female. As a result of experiments with adrenalin on rabbits Steblo came to the conclusion that the internal secretions from the ductless glands play a rôle in sex determination. After feeding a 1:1000 solution of adrenalin hydrochloride to the animals for eight days they showed a loss of 30 to 50 gm. in weight. The uterine horns were blue and atrophic and in the ovaries the germinal vesicles had lost chromatin. The urine contained albumin and gave a positive adrenalin reaction.

Since it acts in opposition to the oophorins Klein has employed adrenalin in treating that form of dysmenorrhœa in which the uterine mucosa becomes over-œdematous a condition attributed to an excessive production of the oophorins. Not only was the pain much lessened but the duration was considerably shortened. Again in dysmenorrhœa due to insufficient secretion of the ovary adrenalin was combined with pituitrin the former acting as a vasoconstrictor the latter causing the uterus to contract, and thus coagulated blood could not collect. Results of this treatment were also very satisfactory.

#### THE PINEAL GLAND

The pineal gland responds to the influence of pregnancy similarly to the hypophysis. Aschner has shown that it becomes plumper and broader and that post-partum involution is never perfect. Further after extirpation of the ovaries atrophy takes place. This gland seems to be somewhat allied with the thymus in preventing sexual precocity and Marburg, Fränkel and Hochwart have described cases of premature sexual development where tumors of the gland were demonstrable.

#### THE THYMUS AND PARATHYROIDS

The thymus, on the other hand shows a marked atrophy during pregnancy especially in the later months. The post-partum change here is marked the gland undergoing an active proliferative process leading in a short time to complete restoration. In the non-pregnant state the thymus in association with the pancreas and parathyroids is said by Caro to possess an action inhibitory to the thyroid but stimulating to the hypophysis. Other investigators as Lampe, Liesegang and Klose find that this

stimulates the thyroid a conclusion to which Redlich is inclined to assent. Recent work on this phase of the subject is, however, too scanty to provide a basis for new conclusions.

Of the relation of the thymus gland to the general metabolism but little has been worked out. Whether it inhibits the development of the ovary or whether such development follows on the withdrawal of the thymus secretion is indefinite. Experimentally it is increased after oophorectomy as is the pituitary gland before puberty. With the hypophysis it controls the growths of the body structures in general and with the pineal gland it probably prevents sexual precocity.

Cruik has studied the parathyroids in pregnancy and concludes that they show no increased functional activity until the puerperium. Wassagla produced tetany in dogs by extirpating the parathyroids almost completely just previous to pregnancy. Vassales had the same result where the extirpation took place during lactation. This does not prove however that parathyroid insufficiency is the only factor or even an essential one in tetany or eclampsia. After complete thyro-parathyroidectomy Werelius found that pregnant dogs died of tetany from five to ten days sooner than non-pregnant dogs. This investigator hoped to show that unborn pups would transmit to their mothers their own parathyroid secretion thus proving that these glands functionate in intra-uterine life. In support of this theory his experiments were disappointing the only conclusion accruing being that the removal in pregnancy of any organ possessing internal secretory activity would hasten symptoms ordinarily associated with such removal unless compensated for by vicarious organic function in the fetus.

#### THE MAMMARY GLAND

The relation between the mammary gland and the genital organs finds explanation in the influence of a hormone according to the results of transplantation experiment by Cohn who was unable at the same time to trace the origin of the hormone. No doubt has existed for many years as to the influence exerted by the ovary on the development of the breast but this is not to be confused with the influence exerted on the mammary gland. No definite research during the embryonic period has been made as to the influence of the maternal breast has been un-  
# when is the effect of castration is of slight evidence of mammary where the uterus

was rudimentary or absent. Cramer implanted ovarian tissue from an osteomalacic woman and effected menstruation and the development of breast tissue. While not proven it is most probable that the mammary changes of mensturation are due to the ovary. The breast changes of pregnancy however are very different. Starling, Biedl and Foa have claimed that the hormone stimulating lactation takes origin in the fetus while Halban shows that the death of the fetus does not prevent lactation but that death of the placenta does. Hence Halban and Niklas argue in favor of a hormone from the chorionic epithelium a theory which at present seems most tenable. Castration shortly after conception does not prevent breast changes or the secretion of milk. Cohn is not so certain of a specific action from the placenta and suggests that the increased mammary production during the puerperium is due to a non-specific lymphagogue activity.

On the other hand such phenomena as milk secretion after castration, changes in the climacteric or in case of purulent or neoplastic destruction of the ovaries all point to an antagonism between the ovary and breast. The essential lymphagogue or leuko-stimulant depends on the ovary in so far as they become effective only after ovarian activity has ceased. Sterilization of the glands in guinea pigs had no influence on the length of pregnancy or labor as reported by Schiffman and Taylor. Results coincide with Scherbach's. The injection of mammary gland extract into animal not fully developed retarded the ovary or testicle in its complete growth. These indifferent results from experimental research may explain in part the non-steratogenic outcome following operative procedure such as oophorectomy in carcinoma of the breast and mammary amputation to limit ovarian activity in extreme cases.

#### THE DECIDUA AS A SOURCE OF INTERNAL SECRETION

The study of the glandular internal secretion has led to many very interesting researches into allied problems. Of these one is a study of the fetal trophoblast from the point of view of cell physiology. This has been indicated with respect to the breast from the work of Niklas, Halban and Lyall. Lyall and his group further suggested the theory that the chemistry of cell change in the embryonic chorion is responsible for the development of the fetus. Yet another idea is that expressed by von der Heide that placental anaphylactic reaction is from fetal or placental hormones which are transmitted to the maternal

blood in excess amounts at the end of gestation. Kolme has attempted to offset this theory in recent experimental work on guinea pigs. In his series labor was not influenced by the intravenous injection of relatively large doses of maternal pig serum collected just before and just after labor nor by injection of serums from young pig removed at term by abdominal section and immediately after normal birth nor by placental extract and human placental serum. Kolme therefore regards von der Heide's theory as not supported experimentally and labor as not an anaphylactic process.

The tendency to regard any structure of perfect cellular construction as capable of producing an internal secretion had led Blamen to express the opinion that active dilatation of the uterus is due not only to the influence of the corpus luteum but to that of the decidua as well. He saw a striking histologic affinity between the glands of internal secretion and the decidua. On this basis Gentili undertook a series of experiments to determine the presence or absence of some specific secretion. Human bovine and canine decidua extracts were extremely toxic when injected into rabbits. Decidua extracts from rabbits and guinea pigs were toxic in increasing degree when injected into animals of the same species. The physical signs and symptoms following injection were similar to those produced by intravenous injection of glands of internal secretion as were post mortem appearances. In some cases the toxicity was greater when the extract was taken in the early months of gestation. Decidua extract further shows a constant influence on the blood pressure lowering it rapidly with a disturbance of the cardiac and respiratory rhythm. Gentili concludes that in the decidua there exists a substance which favors the intravital coagulability of blood and which may be neutralized by the serum of the blood of animals of the same species. Hence the decidua possesses sufficient of the characteristics of the endocrinal system to be regarded as a gland of internal secretion. It is to be hoped that further work with this particular structure will be undertaken.

With our present knowledge the entire endocrinal system can but be considered as a whole and the various internal secretions be studied together. With further clinical and experimental research however it may prove that more particular effort may be directed toward a certain organ in the hope that a more informed may be secured. The subject is difficult and involved yet in backbones of exact standards today to show that the question of the correlation of the



# ABSTRACTS OF CURRENT LITERATURE

## GENERAL SURGERY

### SURGICAL TECHNIQUE

#### ANÆSTHETICS

Boothby W M : The Determination of the Anæsthetic Tension of Ether Vapor in Man with Some Theoretical Deductions Therefrom as to the Mode of Action of the Common Volatile Anæsthetics *J Pharm of Exp Therap* 19 4 379  
By Surg Gynec & Obst

The term anæsthetic tension is employed to indicate the partial pressure of ether vapor that after equilibrium is established can maintain the subject in the stage of ideal surgical anæsthesia for an indefinite period. Curves are given showing that the anæsthetic tension of ether vapor for man is between 47 and 54 mm—probably 51 mm.

A working hypothesis based on the theory of Meyer and Overton is suggested to explain the mode of action of the volatile inhalation anæsthetics which can be summarized in the quantitative reversible equation  $Mn + An = MnAn$  in which the percentage saturation of the susceptible molecules in the nerve cells ( $Mn$ ) and therefore the inhibition of the cell function—the depth of anæsthesia is dependent on the tension of the anæsthetic vapor ( $An$ ) to which these susceptible molecules are exposed.

To harmonize the fact that large anæsthetics occur in the amount of ether required by the usual methods of anæsthesia with the fact that the same ether tension produces the same degree of anæsthesia in all patients it is pointed out that the apparent variation can be accounted for by (1) changes in the volume of respiration (2) changes in the rate of circulation and (3) by a possible alteration in the rapidity with which the above reversible reaction takes place under a slightly different chemical environment.

Flemming A L : A Review of Inquests Concerning Deaths During Anæsthesia *Proc Roy Soc Med* 9 4 Sect Anæsthetics 7  
By Surg Gynec & Obst

The author gives a summary and analysis of 700 deaths from anæsthesia culled from the lay press accounts of coroners' inquests. The lack of scientific accuracy and completeness is to be regretted and also the fact that within the profession there is no adequate source of knowledge as to cases in which anæsthetics have any part in causing death. To illustrate a only 542 of the 700 is the kind of anæsthetic mentioned. Indiscreet selection of the

anæsthetic is the first cause mentioned. Chloroform was used in many cases where it is now known to be relatively or absolutely contra-indicated. Formerly most of the administrators were men of very limited experience who perhaps acted on the example of men of greater judgment rather than on thorough instruction and training which brings forcibly to attention the question whether there is not some deficiency in the practical part of our teaching system.

The preponderance of chloroform is striking 378 cases to 28 only of ether beside 100 of mixtures containing chloroform. Indeed it is inexplicable considering the world's knowledge that ether is safer and should be the anæsthetic of choice. This fact is graphically shown in one of eight tables which the article includes on the anæsthetic used. The other tables are on the age of patient, sex, apparent cause of death, nature of operation, stage at which death occurred, complicating factors and anæsthesia of embarrassed breathing.

The writer points out the emphasis revealed by these facts of asphyxia under chloroform, the prominence of tonsils and adenoids in embarrassed breathing, the sudden death in such cases even after operation (due to ventricular fibrillation from lightness of anæsthesia or syncope or asphyxia?) and he points out the difference between what he terms incomplete and light anæsthesia. As to ether as the anæsthetic especially in cases of embarrassed breathing he advocates it for induction even where chloroform must follow. The anæsthetic was responsible for death in 521 of the 700 cases. Of deaths after the operation, acidosis was alleged as the cause in only 7. In referring to the work of Levy on ventricular fibrillation under chloroform he points out the intermission and re-application of the anæsthetic a practice we now know to be very reprehensible though the many unskilled administrators seem slow to appreciate it. In anæsthesia the choice of drug is shown to be important, chloroform and adrenalin with chloroform being dangerous.

The article is a most instructive one, barring the unscientific yet only source of information, and the writer deserves thanks for his painstaking compilation. Surgeons in general and untrained administrators in particular are too prone even in these enlightened days to let anæsthesia be a matter of routine or unthinking application and for lay

sources of statistics to show anesthesia so hazardous does injustice to the best available work. The discussion centered around the inaccuracy of the lay information and the demand for professional records accessible for study—a matter those who have worked on anesthetic mortality must appreciate.

Gwathmey J T: On Ether Anesthesia. N Y M J 913 xciv, 1101 By Surg Gynec & Obst

Regarding the former use of cotton oil for oil ether anesthesia the author states that it was used because it parted with ether in solution readily but an error of a hospital pharmacist in compounding it with olive instead of linseed oil thereby preventing proper mixing of the lime water prompted the use of simple olive oil, which has continued and he therefore uses 75 per cent of ether with 25 per cent of olive oil.

The advantages claimed for the method are (1) Avoidance of apprehension caused by a face mask (2) no expensive apparatus (3) after effects reduced to minimum (4) complete relaxation (he claims more than in any other known method) (5) the limits of safety are widened compared with other methods (6) a more even plane of anesthesia than by inhalation methods unless in the hands of a skilled anesthetist with perfected apparatus. These conclusions were based on about 100 cases in which this method was used the ages ranging from 4 to 71 years some with careful blood and urine and blood pressure observations. The patients' choice of this method after having had experience with other methods is cited in argument.

Nine illustrative cases are cited. All but one—a girl of 9 years—received preliminary medication usually morphine and atropine hypodermatically and chloroform by rectum. In some a portion of the mixture had to be withdrawn if signs of over dose cyanosis, stertor or respiratory arrest. This suggests a peculiarity of oil ether rectal anesthesia that respiration should be smooth and easy with out stertor and with reflexes, especially hili reflex present. No deaths were properly charged to the anesthetic though one ensued within twenty four hours from extensive organic disease. Care and good judgment must be exercised in the doses of preliminary medication and in the strength of the ether solution.

Physiological action is based upon the separation of the ether from the oil after its introduction its absorption as a gas circulation in the blood, passing through the lungs where part is lost by exhalation thence reaching the brain. The first symptom experienced by the patient is a loss of sensation in the lower extremities. Correspondingly the return of sensation and pain follow a state of consciousness. It is argued that a wide latitude of safety is proved by the recovery of one case of respiratory arrest for eight minutes that it may be possible by injecting weak solution, to use this method for relief of pain in place of morphine. Yet action depends on the

circulation of the ether through the brain moreover preliminary hypodermatics explain analgesia.

The indications for the use of the method are, especially bronchoscopy (Graves disease other conditions of fear or need of an association) operations on or about the head cases of previous nausea and vomiting. The contra indications are the same as for ether also colon and rectal inflammations. When a surgeon must work alone or depend on a layman for help instead of using the full strength it is best to substitute a weaker solution and add a supplementary anesthetic by inhalation to avoid the possible need of withdrawing any.

The dose suggested for guidance is: For children under 6 years a solution of 50 per cent 6 to 12 years, 55 to 65 per cent—these without preliminary medication 12 to 15 years the same with perhaps addition of morphine  $\frac{1}{4}$  gr and atropine  $\frac{1}{200}$  from 15 years upward 75 per cent with preliminary medication according to the individual case 30 minutes before operation and with usually chloroform 5 gr in ether 2 dr mixed with olive oil 2 dr by rectum. The preparation of the patient includes irrigation of the colon but not purging and rest in bed for two hours. The technique is introduction of the oil ether solution by funnel and catheter to 3 or 4 inches within the rectum the patient in the Sims position taking at least five minutes for eight ounces. After the operation a pair of small rectal tubes are introduced and the colon irrigated with cold soap suds the about 2 to 4 oz of olive oil only introduced for retention.

Heyd C G: Rectal Anesthesia Technique for the Induction of Oil Ether (Colon) Anesthesia (Gwathmey) Post-Grad Jle 9 4 xxi 120

By Surg Gynec & Obst.

Heyd reports 30 cases of colonic ether anesthesia from the New York Post Graduate Hospital. The technique used is as follows:

The preparation consists of mild laxative the night before operation but no purging soap suds enemata in the morning and saline irrigation of the colon three hours before operation.

The contra indications are the same as for ether though bronchitis, asthma and illness from former ether by inhalation are not a hindrance. Diseases of the lower bowel considerable distress by the patient on the introduction of the solution are contra indications.

The apparatus consists of small catheter and funnel for the oil ether solution and two small tubes for withdrawing any of the solution from the rectum.

One hour before operation there is administered per rectum chloroform gr xx ether a dr oil 1 dr of each drops to 4 one half hour before operation an injection of morphine gr  $\frac{3}{4}$  atropine gr  $\frac{1}{200}$ — $\frac{1}{100}$  is given hypodermatically. The mixture consists of olive oil 2 ounces ether six ounces. For weak anemic adults ether 55-65 per cent oil 45-35 per cent for children the 50

per cent in oil. With the patient in the Sims position the catheter is inserted 4 inches and the solution injected, taking at least 5 minutes. The quantity used is 1 ounce to each 20 lbs of body weight. There should be a delay of 10 to 30 minutes before moving the patient.

The danger signals are loss of lid reflex, stertor or embarrassed respiration approaching cyanosis. When any of these are present 2 to 3 oz of the solution should be withdrawn from the rectum.

The post-operative treatment consists of immediate irrigation of the rectum with cold soapsuds then withdrawing one tube 2 to 4 oz of olive oil and a pint to a quart of cold water should be injected and the remaining tube withdrawn.

**Skilern Jr., P. G.** On the Blocking of Infra-Orbital and Mental Nerves at Their Foramina to Induce Operative Anesthesia in Their Cutaneous Distribution. *Surg Gynec & Obst* 1914, 18: 387. By Surg. Gynec. & Obst.

In certain operations upon the face local anesthesia by subdermal infiltration may be unfeasible because of the close relation at some places of cartilage or of bone to the surface as well as of the disadvantage of working in tissues made edematous by the injection. The distribution of the fifth nerve to well defined territories and the emergence of some of the important branches from superficial foramina render nerve blocking an ideal method of anesthesia. The author describes the applied anatomical technique for the infra orbital and the mental nerves.

The first patient presented upon the lower half of the right side of the nose just above the ala an indolent epithelioma—rodent ulcer—the size of a thumbnail. It was decided to desiccate the ulcer with the high frequency spark. On account of the denseness of the tissues and the lateral cartilage forming the floor of the ulcer infiltration was not feasible. Being in the territory presided over by the nasal branch of the infra orbital nerve the writer decided to block that nerve at its emergence from the infra orbital canal. Using novocaine adrenalin solution the needle of the syringe was directed to the infra orbital foramen 1 cm below the lower margin of the orbit and midway between the canthi. Paresthesia was obtained and the nerve blocked. The operation was painless.

In order to determine the feasibility of infiltrating the nerve throughout the infra orbital canal Skilern injected the latter with methylene blue in a cadaver and found that it traveled back to the sphenomaxillary fossa. He suggests this method for the relief of toothache and for painless extraction of teeth.

The second case had to do with blocking of the mental nerve to anesthetize the lower lip for operation upon an epithelioma at its center. Both mental nerves were reached at their foramina. The technique is described in detail. Had there been cervical lymph nodes to be removed it would have

been feasible to have blocked the second cervical nerve at the middle of the posterior border of the sternomastoid muscle. The author points out that the dental branches to the incisor and the canine teeth may be blocked through the mental foramen and since both nerves supply six teeth genuine painless dentistry would be realized for nearly one-fifth of all the teeth and at least for the most sensitive ones. Toothache in any of the six may be readily relieved.

## SURGICAL INSTRUMENTS AND APPARATUS

**Quénu E. and Mathieu P.** Apparatus for the Treatment of Fractures of the Leg (*Appareil pour le traitement des fractures de jambe*). *Pr 116* *med* 1913, 23: 98. By Journal de Chirurgie.

Quénu and Mathieu have modified Lambret's apparatus which consisted of two skewers transfixing the bone above and below the seat of the fracture and in which reduction or shortening was produced by withdrawing the two skewers from each other along two rods lying parallel to the axis of the limb. They have modified both the skewers and the lateral rods.

Each skewer is a shaft of nickel plated steel 25 cm long varying in diameter up to as much as 6 mm. One of its extremities ends in a bit 2 cm long with fine threads; the other ends in a flattened head to be inserted into the auger.

Each rod is composed of two shafts one of which screws into the other; the solid rod is a screw



Fig. 1



Fig. 2

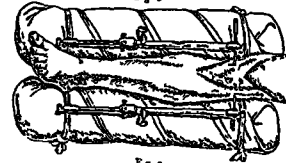


Fig. 3

FI (Quénu and Mathieu). Skewer with ideas to hold the hooks of the rod in place.

Fig. 2 (Quénu and Mathieu). A rod with bit to immobilize the solid shaft with hollow shaft. B small hook to facilitate the turning of the barrel screw.

Fig. 3 (Quénu and Mathieu). Quénu and Mathieu's apparatus in position.



throughout its length with threads 2 mm apart and it is passed through the hollow shaft by a screw turning in a circular groove on the corresponding end of the hollow shaft. This screw is barrel shaped and has four thumb pieces which facilitate its turning. The terminal end of each rod has a hook into the opening of which the skewer fits.

The accessory pieces include a screw to the

skewer by a pressure screw which holds the hook in position and prevents its being displaced inward or outward and a little guard which is screwed onto each pointed end of the skewers after the apparatus is in place.

For the technique of application of the apparatus the reader is referred to the original article.

J. DUNN

## SURGERY OF THE HEAD AND NECK

### HEAD

Frank, L.: *Epilepsy Surgically Considered; a Preliminary Clinical Report*. *Am J S & 194*  
xxvii 113 By Surg. Gynec. & Obst.

The author divides epilepsy into the two classical types: (1) the so-called idiopathic essential or genuine and (2) the secondary Jacksonian or traumatic. Nearly all medical men agree that the proper course of treatment of a secondary epilepsy is operative. However, the more we know about epilepsy the more we are inclined to ascribe some definite cause for its onset and the more cases are considered subjects for surgical treatment. Up to the present the only successful treatment has been surgical and the author makes a plea for operative interference when there is a possibility that the focus of the trouble can thus be reached.

The method which the author usually follows is a two-step operation. At the first sitting the cranium is opened and at the second eight to ten days later the dura is opened and exploration of the brain carried out. In a case which the author reports such an operation was performed and the motor areas for the arm center the first mainly affected was excised 6 mm deep. Following the operation the patient made a gradual but steady recovery.

J. H. SCHEER

Kerrison, F. D.: *Barany Theory of Cerebellar Localization: Diagnostic Value of the Pointing Test in Cerebellar Abscess*. *Laryng. & Otol.*  
xxii 9 By Surg. Gynec. & Obst.

In the diagnosis of cerebellar abscess without focal symptoms the application of the pointing test is of value but before these can be applied a knowledge of the normal pointing reaction is necessary. By this is meant the departure from the normal pointing accuracy which regularly occurs in response to vestibular irritation. Normally with eyes closed and having located some fixed object by the sense of touch the patient lowers the arm and again brings the finger into contact with the object. Then if the right ear is irrigated with cold water a rotary nystagmus to the left develops and the individual tends to fall to the right. If the pointing accuracy is quickly tested it will be found that the hand in being lowered will deviate from the vertical plane to the right and on being raised will swerve still further to the right describing a V

to the right of the object. Stated as a rule the pointing deviation resulting from vestibular irritation is invariably in the direction opposite to that of the induced nystagmus; it therefore corresponds with the direction of the falling tendency.

In suspected cerebellar disease the loss of pointing accuracy in both hands should be tested. If the symptom is present it will be found that the arm corresponding to the cerebellar lesion will regularly deviate outward while the opposite hand will continue to point with normal accuracy. This result should then be corroborated by testing the reaction to vestibular irritation when it will be found that in the presence of an induced nystagmus the affected arm does not deviate in the opposite direction to the nystagmus but continues to deviate outward while the other arm deviates in the opposite direction. In a case reported by Barany in which these reactions were perfectly illustrated following evacuation of the right cerebellar abscess the normal pointing accuracy of both arms became normal but on testing the reaction to vestibular irritation the left arm deviated to the left while the right arm continued to point with normal accuracy.

Barany believes that there are separate centers in the cerebellar cortex for pull or tonic upon some particular point or for controlling muscle groups. The effect of any lesion functionally suppressing any one of these centers is equivalent to stimulating the opposing center and thus the spontaneous deviations from normal accuracy resulting from cerebellar lesions are to be considered wholly the result of cerebellar nerve injury. As yet we have definite formation of only a few important centers that exert exerting upward tonic upon the wrist and shoulder being located in the middle inferior lobe of the right hemisphere. These are the most important from the standpoint of diagnosis as they are the centers most commonly involved in cystic cerebellar abscess.

Barany's theory of the cause of the above phenomena is as follows. The spontaneous outward pointing deviation which occurs as an occasional focal symptom of cerebellar abscess or tumor is caused by pressure upon the center of onset. In the case of the wrist or shoulder the upward tonic being for the time abolished the hand or arm in pointing is dominated by the still intact center for outward tonic and therefore deviates outward. When the abscess is evacuated the pressure is relieved and

the center regains in part its control of position sense in the joint involved. This partial restoration of functional activity is probably reinforced by the balancing of activity in the opposing center for outward tonus and reasoning by analogy it is also possible that the cerebrum may play some part in the correct arm movements in the vertical plane.

E K ARMSTRONG

**Anhausen G Brain Puncture (Die Hirnsp. Luen)**  
*Erg b d Chir u Orth p 93 vu 330*  
 By Zentralbl f d ges Chir u Grenzgeb

A series of questions which the author addressed to the large hospitals showed that internists and neurologists and even surgeons were opposed to puncture of the ventricles. It was the aim of the author in his monograph to overcome this opposition. After a short introduction he discusses the technique in detail the diagnostic value of the procedure depends on a thorough knowledge of it and following it carefully in all the details. The different modifications are discussed critically and the comparative value of the different instruments used.

The author believes that puncture should be performed only when it is possible to follow it up immediately by trephining if necessary therefore it should be done only in the operating room for in some cases of abscess and hemorrhage it is necessary to trephine at once. Its greatest diagnostic value is in the local diagnosis of intracranial hemorrhage for by no means all of these cases are typical especially where there is also concussion or contusion of the brain or fracture of the skull. The same thing is true in traumatic coma. It makes the diagnosis of abscess easier and the author believes the danger of spreading the infection is greatly exaggerated.

Puncture should be practiced only with great caution in brain tumor for small hemorrhages from the finer blood vessels which cannot always be avoided may cause threatening general pressure symptoms. In the diagnosis of hydrocephalus internus it is equal to lumbar puncture.

The author is much more restrained in his discussion of the therapeutic effects except in hemorrhage. In every supratentorial hemorrhage it can be used as a palliative treatment in order to gain time for peritoneal subdural effusions it often suffices of itself to avoid the after effects. COSTE.

## NECK

**Caldwell C E. Congenital Tumors of the Neck.**  
*La cel Cl 94 364*

By Srg Gynec &amp; Obst.

The author discusses the embryology of tumors of congenital origin comes to the conclusion that the embryonic adductors topographically the lymphatic cavities described by Veau and the jugular sacs described by Sabatier but different interpretations of the histological facts and that in these lymphatic cysts—perhaps more accurately

speaking jugular sacs—we have the fetal anlagen which result by arrested evolution in the multilocular serous cysts, the nature and disposition of which correspond most accurately with that of these sacs. The absence of a true endothelial investment of these sacs or cysts may be explained on the theory of atrophy from intracystic pressure.

The author offers the following classification of congenital tumors of the neck.

**Location**—Median—From thyroglossal duct from accessory thyroid rests

**Lateral**—Branchiogenic cysts multilocular serous cysts teratomata branchiogenic carcinomata (Volkman) carotid body tumors

**Consistency**—Solid—Teratomata branchiogenic carcinomata carotid body tumors

**Cystic**—Branchiogenic Ectodermic-dermoid endodermic mucoid entoectodermic-mucoid Serous cysts or mesodermic Multilocular cysts hygroma colli hydrocele colli cystic lymphangioma lymphocoele

The case is reported of a boy 8 years of age who for three years had had a tumor which had been aspirated several times but had always returned. The tumor was located on the right side of the neck and extended from the mastoid and external auditory meatus down to a finger's breadth from the clavicle at the junction of its middle and inner thirds and from almost the median line posteriorly to the middle of the right inferior maxilla in front. The tumor was not tender and seemed to fluctuate throughout. The aspirated fluid was straw-colored and boiled starch solution treated with tincture of iodine was decolorized by it. The tumor was removed by an incision through the skin over the border of the mandible. It was found to be a multilocular serous cyst a lymphocoele.

LOWARD I CORVELL.

**Iversen T The Parathyroid Glands in Goiter and Basedow's Disease (Les glandes parathyroïdes dans le goitre et la maladie de Basedow) A ch nter i d h 193 54**  
 By Journ l de Chirurgie

The parathyroid glands are independent organs having a special and necessary function. In the normal state there are two parathyroids on each side in 81 per cent of the cases in 9 per cent of the cases 3 and in others 5. The dimensions are on an average 6 x 4 x 2 millimeters. They are located also on the posterior border of the thyroid gland and are in relation with the branches of the inferior thyroid artery and the recurrent laryngeal nerve. The location of the right recurrent nerve is somewhat different from that described by the classics. It is more apt to be injured in operations for goiter than the left recurrent.

Among 25 cases of goiter 22 of the specimens being from the cadaver and 3 of them from operation the author found four parathyroid glands in 14 cases or 56 per cent 3 in 9 cases 36 per cent 1 in one case and 5 in one case.

In goats the upper parathyroids keep their normal position the lower ones are displaced downward by the growth of the thyroid. Their size is practically the same as in the normal condition. Sometimes however there is an increase in length and breadth with a decrease in thickness. There is no change evident in the microscopic structure. In some specimens from operation there have been recent hemorrhages.

In 5 cases of Graves' disease he found 4 parathyroids four times and 2 once. The size and location of the parathyroids are the same as in goats. The histological structure does not show any constant change. In particular the number of fat-cells in the interstitial connective tissue is not always increased. Here too specimens from operation often showed recent hemorrhages.

In man as in animals the total removal of the parathyroid glands causes fatal tetany. It is a question whether leaving one parathyroid suffices to prevent tetany but it is certain that if two glands are left it does not occur. In some cases the tetany is chronic and trophic disturbances predominate.

Pregnancy and labor increase the sensitiveness to parathyroid insufficiency a point which should be remembered in operations for goiter on women. The author found parathyroids in the specimens which he examined in more than half the cases of extirpation and resection and in some cases of enucleation of goiters. He only found them rarely in cases of enucleation and resection.

The best operation for sparing the parathyroids and avoiding tetany is a slight modification of Kocher's enucleation resection. The operation should be subcapsular. A layer of thyroid tissue 4 cm broad should be left in front of the recurrent nerve. The large branches of the inferior thyroid artery should be avulsed and the small branches ligated at their entrance into the thyroid gland. The veins also should be ligated as far as possible to the thyroid. There is no known treatment for chronic tetany. Recent experience in the transplantation of thyroids has shown that only autotransplantation gives any results while in homoplastic transplantation the graft appears or loses its function. CARROLL

## SURGERY OF THE CHEST

### CHEST WALL AND BREAST

Judd L. S. Final Results in Operations for Cancer of the Breast. *Surg. Gynec. & Obst.* 94, 11, 672. Gynec. & Obst.

Judd presents a review of the results of operations for mammary cancer in the Mayo Clinic from January 1, 1901 to January 1, 1912. This covers 603 cases of whom it was possible to trace the subsequent histories in 514. In all the patients the operations were radical and consisted in the removal of the entire breast, axillary glands and fat, including the pectoralis major and minor muscles, usually all in one piece. The diagnoses in all of the cases were made from both microscopic and microscopic evidence. Of the 603 patients 2 were males, one of whom is alive without recurrence 1 year after the operation and the other died at the end of 2 years and 3 months from recurrence.

The youngest patient was 5 years of age and the oldest 85 years of age. By decades the distribution was as follows:

20 to 30 years of age	13
30 to 40 years of age	37
40 to 50 years of age	228
50 to 60 years of age	147
60 to 70 years of age	89
70 to 80 years of age	27
80 to 90 years of age	1

Of the 13 patients under 30 years of age 5 are alive and well without recurrence. Of the 514 patients of whom the subsequent history is known 266 or 52 per cent are known to be dead though

21 of these died from other causes with a clinical sign of recurrence of carcinoma. The balance of 49 per cent of deaths probably from cancer for the entire series. Of the 514 patients 248 are known to have lived from 2 years to 11 years and 4 months. 37 of these are known to have recurred.

Of the patients operated on during the years 1902 and 1903 40 have been traced. 27 are known to be dead from various causes, 17 per cent of 31 alive without recurrence more than 1 year. Three of those who died lived more than 6 years and died from other causes.

Of the 321 patients operated on more than 5 years 266 were traced. 49 are known to be dead and 106 live a percentage of 40 who have lived more than 5 years. Six of the living have recurrences at present. Fourteen of those dead have died from other causes than cancer.

Of the 510 patients operated on more than 3 years ago 437 have been traced. 234 are dead and 191 living a percentage of 45 of patients living more than 3 years. Twenty-seven of these have recurrences at present. Eleven of those dead have died from other causes.

One case is reported of a patient who died 9 years and one month after the primary operation from general carcinoma, one from interval metastases without local recurrence 6 years and 15 months after operation and one on whom a secondary operation for recurrence was done 7 years after the primary operation. In this latter case the patient remained well nearly 3 years after the secondary operation.

While noting the importance of an immediate radical operation after a diagnosis of carcinoma from a test specimen Judd notes that the delay in such procedure does not always necessarily mean a bad prognosis.

Conversely he notes that patients in whom there is a very small mammary lesion without demonstrable glandular involvement may die of early internal metastases. He notes that while oedema of the tissues is usually a contra indication for operation one patient in his series in whom the prognosis was bad because of oedema and yet who was operated on as a palliative measure is still alive without recurrence 5 years and 3 months later.

Judd notes that cancer in the lactating breast has usually been rapidly fatal. A very large percentage of the patients heard from have reported that functionally their arms are practically as good as ever. Judd notes that when it has been necessary to destroy one of the motor nerves the function of the arm is much more apt to be impaired. Not over 5 per cent of the cases have had swelling of the arm. His conclusions are as follows:

1 Results in operations for cancer of the breast are as good if not better than results in operations for cancer elsewhere.

2 The prognosis in younger people who received the benefit of an early operation was better than had been expected.

3 The prognosis is variable in a certain percentage. An extensive external involvement may give a fair prognosis while a slight external lesion may terminate early from internal metastasis.

4. That metastasis may occur many years after the operation, though in the great majority of instances it will appear in the first few years if at all. The difference between the percentage of patients living over 3 to 5 and 10 years is not as great as might be expected but this is because most patients who die of the disease die within the first 3 or at least the first 5 years. Living 5 years without recurrence means a very small probability of trouble after that.

5 Comparing these results with those of former years, we feel that the results are improving and that the improvement seems due to the fact that patients are coming earlier for treatment rather than to any improvement or change in the technique.

MacCarty W. C. Clinical Suggestions Based upon a Study of Primary Secondary (Carcinoma?) and Tertiary or Migratory (Carcinoma) Epithelial Hyperplasia in the Breast  
S. G. C. & Ob. 94 184

By Surg. Gynec. & Obst.

The mammary acinus consists of two rows of epithelial cells when the differentiated cells (inner row) and the undifferentiated cells (outer row) are present the histologic picture may be spoken of as primary epithelial hyperplasia. When the differentiated cells are absent and there remain only the hyperplastic undifferentiated cells of the

outer row the condition may be referred to as secondary epithelial hyperplasia. When the line of demarcation between the hyperplastic undifferentiated cells and the stroma is indefinite or absent and the epithelial cells appear in the periacinar stroma the condition may be spoken of as tertiary or migratory epithelial hyperplasia.

At present surgeons have no very definite method or standard of dealing with the doubtful group. Radical operations are sometimes done when they are not needed simply because the surgeon gives the patient the benefit of the doubt. The writer has occasionally seen carcinomata excised for benign tumors.

It seems that there should be a mean between the two extreme conditions and this mean should with the aid of a knowledge of the stages of epithelial hyperplasia serve to scientifically solve the following problems:

1 The percentage of cases of tertiary hyperplasia with or without glandular involvement which may be cured after an arbitrary period of ten years from the time of radical operation.

2 The percentage of cases of secondary hyperplasia which will remain well or recur after the removal of the mammary gland itself without the removal of the glands, muscles and large amounts of skin.

3 The percentage of cases with local chronic mastitides or encapsulated conditions which return later with secondary or tertiary hyperplasia after local removal.

The question for the surgeon to decide is whether or not he is willing to run the chance of local recurrence after wide local removal of a malignant condition followed by an extensive operation after microscopic examination or take the credit of doing radical operation unnecessarily in an attempt toward conservatism. This with our present knowledge can be answered only by conscience and not by scientific data. The following plan suggests itself:

1 The conditions which are associated with classical clinical signs of carcinoma should be treated radically.

2 The doubtful cases in women near or over 35 years of age should have the entire mammary gland removed for immediate examination. If primary or secondary hyperplasia be present nothing more should be done if tertiary hyperplasia be present a radical operation should be performed.

3 In doubtful patients near or under 35 years of age a wide section of the mammary gland including the pathological conditions should be removed for examination. If primary hyperplasia be present nothing more should be done. If secondary hyperplasia be present the rest of the mammary gland should be removed and if tertiary hyperplasia be present the radical operation should be accomplished.

This plan avoids incision of tumors and removes the possibility of unnecessary radical operations.

Clarkson F. A. Primary Endothelioma of the Pleura. *Cand W J* 1914 1 193  
By Surg. Gynec. & Obst.

The author reports the following case in detail. A short discussion also accompanies the case history.

A young Englishman 27 years old applied for insurance but was declined. His family history was good but his physician found dullness as high as the sixth rib with absence of breath sounds in the same region. A month later the dullness reached the clavicle and a puncture removed 80 oz of straw-colored fluid which contained no cellular elements and was negative on culture and inoculation. Five weeks later the fluid reaccumulated in sufficient quantity to cause dyspnea and a second puncture drew off another 80 oz. At the third operation three weeks later some blood was noted in the purged fluid.

The patient complained of no pain—in fact throughout the whole illness the absence of pain was a most striking feature. A slight cough gave enough sputum for examination but no tubercle bacilli were found. Calmette's reaction and later Morro's were both negative. Up to this point in the disease there had been no fever the only subjective symptoms being slight dyspnea on exertion and progressive weakness. The patient lost weight rapidly.

Examination showed deficient movement over the whole right side of the thorax. Vocal fremitus and resonance were absent. Percussion note was dull as high as the second rib and above that. Stethic resonance below the fourth rib no breath sounds were heard above breathing was distant bronchial, with coarse rales at the end of inspiration. The left chest was hyperresonant and the breath sounds were pueril. The apex beat was in the fifth interspace one half inch out side the mammillary line. The splanchnic normal. Posteriorly Crocq's triangle could be marked out on the left side. The liver was at the umbilicus. The spleen was not palpable. Urine: sg 1.019 no sugar or albumin. Blood: red 1,500,000 whites 10,000.

Portions of the sixth and seventh ribs were resected in the anterior axillary line. A large quantity of blood stained fluid escaped and the pleural cavity was lined with innumerable fibrin nodules. A large sized iron tube was introduced from which fluid was constantly discharged at first sanguineous but later the color greenish. The patient gradually grew weaker became remarkably emaciated. In about six months after the symptoms appeared.

At autopsy the right pleura was found to be thickened (5 mm) and firmly adherent to the ribs and sternum. When this was divided a large ragged cavity was disclosed with many rounded tags attached to the wall (from 1 to 4 cm in diameter) as well as numerous stringy masses more less firmly connected with the pleura. The right lung was collapsed and a less but contained no new

growth. The visceral pleura covering it was of the same nature as the parietal—thickened and covered with pedunculated tags. The only portion of the pleura which could be separated at all easily was that part close to the anterior mediastinum. On dissecting off the pleura the new growth was found to be of about the same homogeneous color and consistency as a fresh-cut section of testicle. Very friable and thicker in some portions than others the neoplasm seemed to be confined almost entirely to the inner surface of the pleura. Only in one place was there a definite nodule on the outer surface.

There was a distended stomach and a slightly enlarged spleen all the other organs were in a normal and healthy condition.

Microscopical examination of sections of the thickened pleura showed the new growth to be an endothelioma. The pedunculated tags were almost entirely fibrous. At no place could there be found evidence of the invasion of the new growth into the surrounding tissue the line of demarcation between the lung and pleura being always clear and well defined.

## TRACHEA AND LUNGS

Godlee R. L.: Foreign Bodies in the Air-Passages. *Ch. & J.* 1914 2 111 177  
By Surg. Gynec. & Obst.

The question of foreign bodies in the air passages is of great importance to all but particularly to the general practitioner upon whom rests the responsibility of an early diagnosis. The bronchoscope is not a difficult instrument to use when one has become accustomed to it. Stereoscopic diagrams are strongly urged and it is essential that they be taken in the same way in order to elude the hazy movements and to eliminate shadows due to glands, inflammatory products and vessels. The presence of a foreign body may give rise to very few symptoms though the prolonged or even short residence of a bronchus commonly gives rise to chronic bronchitis and bronchiectasis. The bronchi beyond the obstruction are never cleared of secretion which then becomes septic. The thorough experience has convinced him that it is more common for the patient to forget the incident which led to the presence of the foreign body than to invent a tale.

The most important point of distinction of foreign bodies is whether they are or are not septic. Their own right. Another relative distinction is in regard to those bodies which stay where or they happen to at present those which at once start on their migratory as the constant and reliable motion of the girth with every inspiration being responsible for the latter.

The effects of the lodgment of foreign bodies in the passages vary with the character of the foreign body and the point of lodgment. A large piece of meat or some other similar soft body

if impacted in the trachea quickly causes death. A solid body that completely obstructs a main bronchus causes the whole lung to collapse and septic disintegration follows. A smooth solid body first sets up bronchiectasis in the part from which the involved bronchus come but the process may gradually extend to the whole base first of the affected lung and then of the other. These cases are very liable to pneumonias, hemorrhages or amyloid disease and may at any time terminate in cerebral abscess. If the foreign body is putrid at the time or is one that can decompose the lung changes are much more acute, a definite abscess often forming. This class includes pieces of bone, fragments of teeth and smaller particles easily set free in operations around the mouth and nasopharynx. It is not uncommon for these cases if untreated to end in pulmonary tuberculosis.

Formerly the accepted treatment was a tracheotomy through which various forms of catchers or forceps were used. The invention of a straight bronchoscope has revolutionized the treatment and it is now possible to introduce straight tubes into the secondary and even the smaller bronchi. If it is found impossible to remove the foreign body with the bronchoscope passed through the glottis it is advisable to do a low tracheotomy and introduce the bronchoscope through the wound. Intra-thoracic bronchotomy though difficult and dangerous has at times proved successful when simpler methods have failed. Occasionally it may be advisable to open the pleura and feel the lung if the body has passed into its substance. It is a much simpler procedure if one of the methods of securing ultimate inflation of the lungs is at hand. If the body is felt the lung must be fixed to the chest wall, then incised and the foreign body extracted.

E. K. ARMSTRONG

Benninghoff G. E. Traumatic Rupture of the Lung without Penetrating Wounds of the Thorax, with Citation of One Case. *1st* at J. S. T. 94 xvii 46 By S. R. Gynec & Obst

The author discusses the well recognized method of treating such cases and thinks that while one case is too limited to accept as anything positive yet when the outcome is so gratifyingly unlike that of the regularly expected pleural effusion should be given to the differential method. The case follows:

A boy, 13 years, was taken into the Bradford Hospital fifteen minutes after receiving a severe injury by the fall of the front of a wagon striking him on the upper part and front of the thorax. He was very pale, pulse small and 72, respiration shallow, temperature 96.5°. Examination of the chest showed a deep depression of the chest wall between the nipple and shoulder. At each respiratory excursion and about the depression there was a faint crackling sound. Air crepitations were present beneath the skin of the face, chest and abdomen. In the following minutes taken to exam-

ine him the pulse grew feeble and cyanosis began to show about the face, neck and hands. The diagnosis of traumatic rupture of the lung was easily made also that he was fast succumbing to hemorrhage within the pleural cavity.

The patient was operated at once under chloroform anesthesia. A U-shaped incision was made beginning over the second rib two inches external to the right border of the sternum extending downward six inches curving outward and upward and terminating just internal to the head of the humerus. The skin flap was dissected up uncovering the pectoral muscles as far as the second rib. When the depression was uncovered blood and air escaped in large quantities. Intravenous transfusion of physiological salt solution was begun simultaneously with the operation. The ribs had been simply depressed and spread apart. The second and third cartilages were separated with the knife turned outward over the right shoulder and held there by an assistant. An enormous amount of blood clots was removed from the cavity. The lung was withdrawn and the laceration was found extending transversely across the middle lobe. Blood was pouring from it in a continuous dark stream. The first suture placed at the extreme inner angle of the laceration completely controlled the hemorrhage. Four other sutures were placed and tied and after deflating the lung by gentle manual pressure it was returned into position. The respirations were now 40 per minute but the patient had a good color and the pulse was 120. 24 ounces of salt solution had been infused. The ribs were replaced, the divided ends sutured and the muscles replaced and sutured together. A large flanged rubber tube was inserted through the front of the chest wall in the third intercostal space between the sternum and the anterior axillary line and the skin sutured tightly around the tube. The entire operative field was covered with many layers of gauze, a bandage loosely applied and the patient returned to bed.

The entire operation was completed in thirty minutes. At that time cyanosis had disappeared, respiration was full and without effort and about 40 per minute. The reaction was somewhat severe but no dangerous symptoms occurred. The temperature twenty-four hours after operation was 101° which was the highest point reached during convalescence. The dressings were lifted off the tube on the third day when serum was seen draining through the tube. Percussion and auscultation revealed complete flatness of the chest, the lung was functionless. The tube was removed and the tissues fell together completely closing the opening into the pleural cavity. The lung began to inflate about the tenth day when percussion indicated beginning absorption of the fluid within the pleural cavity. Less than five months after the injury the lung was functioning perfectly except possibly a limited portion in the locality of the lacerated lung tissue and the physical condition of the patient was perfect.

FORNOLD, C. M.

Beckman F H: Decortication of the Lung for Old Empyema. *Arch Surg* 1914 51 85  
By Surg Assoc & Obst

The pathology of empyema is that as soon as there is an accumulation of purulent material within the pleural cavity either local or general nature regards it the same as an abscess in any other part of the body and attempts to limit absorption by washing it off.

In operating on some of the late case this limiting membrane has often been found to be from one half to nearly one inch in thickness. As the fluid accumulates in the pleural cavity the underlying wall of the thorax prevents expansion in this direction and room is found for the accumulation by compression of the lung. If the empyema has continued for any considerable length of time this membrane is so resistant that the lung cannot re-expand after the fluid has been all well to escape by free incision.

It is evident then that if free drainage is established before these adhesions form or before they become firm enough to hold the lung in a state of collapse the lung will quickly obliterate the cavity and the patient be restored to health rapidly. This corresponds exactly to the results obtained with free drainage in the early cases.

It should be remembered that empyema is not a disease of the lung although pulmonary disease may exist at the same time and that the pulmonary tissue is only slightly or not at all involved in the inflammatory process in a very large majority of the cases. In the recognition of small empyema the relationship between pneumonia, other infection and this secondary infection must be remembered and a watch kept if the development of the general pneumonia of infection occurs or persists after the pneumonia is a certain local area although it may not be severe and accompanied by a septic temperature. Almost surely it indicates a localized empyema. The localization of the pus can often be determined by the pain in a localized tenderness on the wall of the chest.

The aspirating needle is often of the utmost service in arriving at a correct diagnosis in these cases. While warnings are given by many writers of the dangers that may occur from producing an exit into the pleural cavity, the author believes that the gain from its use in the matter of arriving at an early diagnosis is greater than the danger that may result from a late recognition of empyema.

A roentgenogram of the chest is of great value in arriving at a correct diagnosis in obscure cases although it is often an extremely difficult and some times an impossible task to determine what the picture shows. It must be kept in mind that the ray picture is the reproduction of a shadow and that a thickened pleura may cast as dense a shadow as an accumulation of fluid.

## HEART AND VASCULAR SYSTEM

Blechnmann G: Clinical and Therapeutic Study of Pericardial Effusions. *Marfan's Epigastric Puncture* (Les épanchements du péricarde. Et de leur traitement. La ponction épigastrique de Marfan). *Thèse de Paris* 1913.  
By Journal de Chirurgie

Blechnmann's work is based on about 500 cases most of them his own in the hospitals of London. He shows the frequency with which pericarditis with effusion is unrecognized for among 4,000 autopsies fluid was found in the pericardium 155 times. Almost half the cases are found in individuals less than 25 years of age and more than half of the cases in children are in those less than 5 years of age. He reviews the symptoms described by the clinicians and finds that most of them are inexact or inconstant.

As to treatment he maintains that the usual method of puncturing the pericardium results in puncturing the pleura or the heart. He believes that Marfan's method is the most rational, the simplest and safest method of puncture. A small trocar or needle for lumbar puncture is passed immediately below the xiphoid cartilage in the median line. It is directed obliquely from below upward and slightly for 2 cm along the posterior surface of the sternum. It is then directed somewhat obliquely backward passing into the space in the lateral insertion of the diaphragm, entering the pericardium at its base. With this method he has been able easily to puncture the same patient 2 times. Pericardotomy is discussed and the author believes that Larrey's method is the best. In this method a left subchondrocostal incision gives easy access to the pericardium by the epigastric route especially in children. It produces a minimum degree of traumatism. It does not involve the pleura and it assures perfect drainage at the lowest point—the only way that is really rational.

The operative indications in pericardial effusions are given as follows. Serious effusion, acute infectious or mechanical puncture, tubercular puncture or pericardotomy with ut drainage, hemorrhagic puncture, purulent pericardotomy with drainage.

The life of the patient depends on early operation. It is better to operate too early and too extensively than too late or not extensively enough. It gives tables of statistics showing the results of puncture and pericardotomy and the results of treatment of purulent pericarditis and concludes with a résumé of 40 cases and a bibliographic index of 4 titles.

Delorme E: Symptômes and Diagnostic of Adhesions between the Heart and Pericardium (Des signes et du diagnostic de la symphyse cardiopéricardique). *Gaz de Médecin* 1913.  
By Journal de Chirurgie

If adhesions of the heart and pericardium are to be treated surgically the surgeon must study its

**symptoms** This has been one of the most disputed fields in medicine but radiography has simplified it somewhat. The symptoms are determined by inspection percussion and auscultation.

Inspection shows (1) disappearance of the apex beat (2) undulatory movements of the precordial wall (3) retreat of the apex on systole (4) retraction of the lower costal and epigastric regions on systole.

Percussion shows increase of the area of cardiac dullness and lack of change in it during respiratory movements and change of position of the patient fixation of the apex and some signs of less importance.

The information furnished by auscultation is not of great value but gallop rhythm duplication of the second sound paradoxical pulse and swelling of the jugulars on respiration are worth retaining.

The chief pathognomonic signs of adhesion at present are the lack of variation in the cardiac dullness and the fixation of the apex. Specialists in heart diseases say that the diagnosis can be made from them alone. The other signs mentioned only confirm it.

Unfortunately the information furnished by radiography is not sufficient to distinguish absolutely between the cases of pure adhesion in which freeing of the adhesions surgically brings relief and the complicated cases. There are some signs however which may be regarded as indicating simple adhesions among them are (1) shadows of the surface of the heart without extension to the rest of the boundary between the pericardium and pleura (2) immobility of the boundaries of the

heart (3) disappearance of the diaphragmatic sinus (4) immobility of the apex (5) constancy in the form of the radioscopic picture of the heart during respiratory movements (6) absence of positive and almost pathognomonic signs of complicated symptoms, such as the disappearance of the clear retrosternal and retrocardiac clear spaces which indicates mediastinitis (7) a combination of the signs of simple adhesion.

Delorme emphasizes the importance of absence of the signs of complicated adhesions. J. DEWEY.

## PHARYNX AND ESOPHAGUS

**Kyle D. B.** Removal from the Esophagus by Means of an Esophagoscope of a Plate of False Teeth Embedded for Eighteen Years. *Laryngoscope* 914 xxiv 185.

By Surg. Gynec. & Obst.

The removal of a foreign body embedded for eighteen years is entirely different from the removal of a body recently embedded because of the organization of fibrous tissue together with curvature of the spine which render the foreign body exceedingly difficult to locate. In the case reported there had been dysphagia and progressive loss of weight over a considerable period. An X-ray showed the plate to be behind the cricoid cartilage. After three unsuccessful attempts it was finally removed with a long biting forceps through a Kahler esophagoscope. Very little hemorrhage or soreness followed the operation but there was still considerable difficulty in swallowing due to loss of tone of the esophageal muscles. F. K. LAM TROG.

## SURGERY OF THE ABDOMEN

### ABDOMINAL WALL AND PERITONEUM

**Ledlard H. A.** Cases of Chyliform Effusion. *Clin J* 914 xl 35. By Surg. Gynec. & Obst.

The author reports 4 cases of chyliform effusion the first associated with probable tuberculosis the second with Hodgkin's disease the third with heart and liver disease and the last was a case with cancer.

The first case the author thinks most interesting. It is that of a boy about 18 years of age who since the age of five and one half years had suffered with several attacks of abdominal pain which were diagnosed as tuberculosis of the abdomen. He was emaciated and the abdomen was greatly distended this distention had been present for 6 years. At the date of operation the patient had a temperature of 100.6 F and was suffering from diarrhea and pressure symptoms from the abdominal distention.

When the abdomen was opened for drainage 6 pints of a milky fluid escaped and a drainage tube was introduced. The fluid was alkaline in reaction and contained 0.6 lb. albumin and 0.2 fat.

Death resulted from collapse 21 days after operation. At autopsy the peritoneum was found to be

studded with milary tubercles. The mesenteric glands were all very much enlarged and in the region of the pancreas in the midline there was a mass of glands and fibrous tissue one and one half inches long. The receptaculum chyli was obliterated by this mass. The thoracic duct seemed normal. The lacteals in the mesentery were much dilated but no rupture was found. Microscopic examination of the glands revealed tuberculosis with a marked thickening of the lymphatic channels. Death was due to tuberculous meningitis.

The second case was that of a girl about 18 years old who presented in general a picture similar to the first. In this case the thoracic duct was compressed by a group of glands in the left side of the neck.

In the third case chyliform ascitic fluid was found in a patient of 38 years with mitral disease. No autopsy was obtained.

The fourth case was that of a woman from whom malignant ovarian cysts had been removed. The author believes that fatty degeneration of the cancer-cells caused the milky appearance of the fluid. F. K. LAM TROG.



## GASTRO-INTESTINAL TRACT

Deave J B Gastric Hemorrhage *S & G nec*  
*& Obst* 914 N 1914 By S & Gynec & Obst

Cases of gastric hemorrhage fall into two groups the surgical and the non surgical or medical. It is as great a mistake to operate on non surgical cases as it is to withhold operation in surgical bleeding. Successful treatment demands a high degree of diagnostic skill in deciding for or against operation.

Blood which is vomited does not always mean gastric hemorrhage. There is hemorrhage from the pharynx or respiratory tract the blood being swallowed and then vomited and hematemesis in hemorrhagic inflammation of the biliary tract the blood reaching the duodenum through the common duct and then regurgitated into the stomach.

Profuse and even fatal hematemesis without demonstrable ulceration of the stomach has been observed both at autopsy and at operation. The author has observed a case by gastrotomy in which the whole mucosa was intensely red and thick and bled at the slightest touch. Such a condition may be considered as a hemorrhagic gastritis and is probably the result of an intense acute infection of the mucosa though it may be due solely to an unknown toxic cause.

Hemorrhage more or less acute may result from the typical acute peptic ulcer. Such hemorrhage is rarely fatal the vessels opened being small and their walls still being soft and normal permit the formation of an occluding clot as blood pressure is reduced by hemorrhage.

In chronic ulcer the vessels eroded may be larger as a result of a sclerosing inflammatory process the vessel wall is rigid and incapable of contraction.

When hemorrhage is the result of neoplasm it is rarely remediable by surgery. Operation may be indicated in gastric carcinoma when hemorrhage chances to be an early symptom or it may be indicated in advanced cancer when hemorrhage is so profuse and persistent as to shorten even the period of prognosis given to cancer. The measures to be adopted are excision gastro-enterostomy or jejunostomy in accordance with the pathology found at operation. In the author's opinion on cases of this sort will be excessively rare as he is greatly opposed to operations being done on cases which are inoperable from the standpoint of cure.

Four essential questions remain to be settled (1) The recognition of suitable cases (2) the time of operation (3) the type of operation to be performed, (4) the proof of the decision by mortality statistics.

Nicolaysen J: The Value of Gluzinski's Test in the Diagnosis of Gastric Ulcer *Tr Am S & G*  
*Ass N 1* 1914 April By S & Gynec & Obst

Kocher in 1912 recommended Gluzinski's test as a means of making the differential diagnosis between ulcer and cancer of the stomach. Ulcer

is as a rule accompanied by hyperacidity while cancer is attended by an atrophic catarrh which causes the disappearance of the free hydrochloric acid. When cancer develops with an ulcer as a basis there may be demonstrated in an early stage of the disease an insufficiency of function of the stomach to produce hydrochloric acid. This is shown by giving two test meals one following immediately upon the other. While the amount of free HCl will increase from the first light meal to the second heavier (beef) one in cases of ulcer it will decrease in cases of cancer of the stomach.

The author and his assistant Grondahl have examined 86 cases of ulcer of the stomach and duodenum cancer of the stomach gastro-enteroptosis appendicular dyspepsia and gall stones. Of the cases of cancer only two had free HCl in the gastric contents. These gave Gluzinski's reaction to wit the amount of free HCl decreased in the second meal but the same insufficiency of function was also found in cases of gastro-enteroptosis. In all cases of ulcer except one there was found a pronounced increase in the amount of free HCl in the second meal. This phenomenon may be used as a differential symptom in the diagnosis between ulcer and other diseases of the gastrointestinal canal which cause dyspepsia.

In two cases referred from the medical ward with the diagnosis of callous ulcer there was no increase in the amount of free HCl and no ulcer was found by the operation—only adhesions which had given rise to the dyspeptic symptoms. Gluzinski's reaction is reliable nevertheless its result is to be considered only as a symptom which must be judged in conjunction with the other symptoms and the history of the case.

Graham C: Observations on Peptic Ulcers.  
*Brit J & S J* 94 clx 3

By Surg Gynec., & Obst

The author presents notes on all cases of duodenal and gastric ulcers operated upon at the Mayo clinic during the years 1906 to 1911. It is often difficult to differentiate ulcers of the stomach or duodenum from lesions involving other organs, but the clinical history is by far the most valuable factor in arriving at a correct diagnosis. The physical examination laboratory findings and X-ray combined are of so valuable as the clinical history.

The periodicity of the attacks is typical in peptic ulcers. The patient usually has several attacks of gastric distress lasting for days or weeks and then disappearing the interval being marked by apparently good health. Each attack is characterized by gastric distress vomiting etc which appear daily during the attack with a certain regularity. Many times the patient has suffered for years until finally he is forced to seek relief.

During the attack, pain is the most common symptom. It comes on regularly one-half to four hours after eating is relieved by eating vomiting alkalies or laeage. The location of the pain and its

radiation is of very much less import than is the time of its appearance and the means which relieve it. The time of the appearance of the pain depends largely on the location of the ulcer.

Vomiting is more common in ulcers of the stomach than in ulcers of the duodenum or pylorus unless some complication—e. g. obstruction—is present.

There are four groups of cases where it is especially difficult to diagnose the presence of an ulcer: (1) Patients sometimes give a typical history of gall stones and no history of ulcer can be obtained. (2) Patients may give no history of previous gastric distress and the first manifest symptoms are those of chronic ulcer with complications—hemorrhage perforation etc. (3) Patients may have very acute symptoms which are exceedingly distressing and which so overshadow any previous distress that the old trouble is forgotten. (4) Patients whose general condition would point toward malignancy.

J H SKILES

Scudder C. L. Stenosis of the Pylorus in Infancy  
Ann S & Phila 914 1: 30

By Surg. Gynec. & Obst.

The author treats the subject in four ways: (1) A systematic statement of the facts concerned. (2) Reasons for surgical treatment. (3) A consideration of two problems encountered. and (4) a review of cases.

(1) *Pathology* A smooth firm non adherent pyloric tumor is always present narrowing the lumen of the pylorus. It is an overgrowth of muscle tissue and not dependent on muscular spasm.

(2) *Etiology* It is congenital because (1) it is often found at the third fetal month. (2) symptoms appear soon after birth. (3) it is frequently accompanied by club foot and imperforate anus and (4) it often contains Brunner's glands.

(3) *Symptoms* Loss of appetite persistent projectile vomiting small bowel passages progressive loss of weight visible peristalsis from left to right across the upper abdomen and palpable tumor in 60 to 80 per cent of cases.

(4) *Diagnosis* The X ray is the chief aid in differentiating this condition from serious cases of pyloric spasm otherwise the diagnosis should be comparatively easy.

(5) *Prognosis* The mortality is high and the length of time a baby will live depends on the degree of stenosis.

2 Medical treatment can cure spasm of the pylorus but utterly fails in true obstruction giving an estimated mortality of 80 to 90 per cent.

The first seven years of surgical interference was necessarily unsettled and gave a mortality of 46.5 per cent. In the last seven years posterior gastro-enterostomy has been accepted as the operation of choice a day to-day mortality is about 13.8 per cent depending a great deal on the baby's condition at the time of operation.

3 The two problems are (1) the effect of gastro-

enterostomy upon the metabolism of the body and (2) the ultimate end of the muscular tumor.

The author together with Talbot of Boston has found that gastro enterostomy has absolutely no deleterious effects on bodily metabolism and normal development. He also concludes from different sources that the tumor probably persists and does not disappear.

4 In conclusion a report is given of seventeen cases operated on by the author which bears out in detail his theories and statements.

PHILLIPS M CHASE.

Lerche W Spastic Tumor of the Pyloric Canal and Other Spastic Conditions of the Stomach Their Surgical Treatment S & Gynec & Obst 94 1: 358 By Surg. Gynec. & Obst.

The author first gives a brief review of the anatomy of the stomach which shows how the various anatomists differ in their description and nomenclature. Particular attention is called to the pyloric canal. A brief historical review is given of the movements of the stomach with a report of six cases representing various forms of spastic contraction of that organ. Three of the cases are of the so called idiopathic variety: i. e. no cause in or about the stomach could be found to account for the condition.

In the first case the patient had had pain in the epigastrium and had felt a lump above the umbilicus for three months. The hard tumor was always found present and of the same size on each of a number of examinations. At operation the tumor was found to involve the pyloric canal. The pyloric end of the stomach was resected and on examination of the specimen no pathologic changes were found. The author considers this case analogous to the so-called congenital stenosis of the pylorus in the newborn.

In the second case the patient had been troubled with much vomiting and distention of the stomach in childhood. Later there was sour stomach nausea vomiting and epigastric pain upon which prolonged rest in bed diet etc. had no influence. At operation a spastic pylorus with a hypertrophied sphincter was found. Posterior gastro enterostomy with occlusion of the pylorus was done after Wilms.

The third was a case of chronic cardiospasm of many years standing complicated by acute pyloric spasm with enormous distention of the stomach. A posterior gastro-enterostomy was performed and the cardiac end of the esophagus stretched.

Case four was a spastic hour-glass stomach caused by pressure from a dermoid cyst situated under the umbilicus.

The fifth case was a combined cicatricial and spastic hour glass stomach caused by ulcer.

The patient in the sixth case had numerous attacks of pylorospasm with enormous distention of the stomach after swallowing a large number of pebbles.

The author reaches the following conclusions:

1 A universal description and nomenclature of

the stomach acceptable to the anatomists physiologists clinicians and X-ray workers would be desirable.

2 The pyloric canal has an important physiological function and its pathology is of interest.

3 There seems to be a resemblance functionally between the pyloric canal and the lower end of the esophagus — the esophagium.

4 Spastic contraction at different parts of the stomach may take place even where there is no augmentation of muscle fibers to form a sphincter. The contracted part may form a tumor of cartilaginous hardness.

5 Idiopathic spastic contractions may occur in the different parts of the stomach.

6 The nervous apparatus of the stomach is a very important factor in the pathology of the organ.

Cope J. T.: The Early Diagnosis and Treatment of Ruptured Intestine. *Proc. R. Soc. Med.* 1914. Surg. Sect. 86. By S. R. Cyrc & Ch. I.

Traumatic rupture of the intestine without any wound of the abdominal wall is often a very difficult diagnosis and yet for successful outcome an early diagnosis is imperative.

The symptoms in the order of their importance are as follows: Pain is constant except in a few of the cases and in these it is usually soon after sign which points toward the correct diagnosis. Pain is demonstrative (1) waves. The expression of the counter pressure may be an indication. Pain is complained of at the site of the lesion and gradually extends (2) pain may be relieved by pressure over the site of the lesion and (3) mass of the peritoneum is felt by rectal examination to be painful on pressure.

vomiting is a frequent and important symptom and if conjoined with pain is quite suggestive. No high to justify operation. The vomit of bilious matter is said to be especially significant.

Distention is a late symptom. Peritonitis and should not be waited for. Diminution of the dullness is a symptom which should not be waited for. Restlessness is often found with intestinal rupture but it also occurs in many other intra-abdominal conditions. Superficial respiration is the natural consequence of commencing peritonitis because of the pain which ensues if a deep breath is taken. The signs of free fluid are not usually present in the early period. Rigidity is an early and a valuable symptom.

Provided there are no chest complications and that renal trauma is excluded the author advocates opening the abdomen on the supposition of ruptured intestine if the following conditions:

1 When severe abdominal pain persists for more than six hours after an injury if the pain is accompanied by either (1) vomiting especially bilious vomiting or (2) a pulse gradually rising from the normal or (3) persistent local rigidity tending to extend or (4) deep local tenderness with shallow respiration.

2 When abdominal pain is absent or very slight, but the pulse rises steadily hour by hour and the patient is very restless or restless.

Of course the advent of any of the typical signs of extensive peritonitis or hemorrhage would make immediate operation imperative.

In the treatment of rupture of the intestines in the greatest amount of discussion centers about two questions: (1) What measures should be taken toward cleansing the peritoneum? and (2) Should drainage be used?

From a review of a considerable series of cases the author comes to the following conclusions: (1) That irrigation with saline solution is inadvisable in cases that are operated on early and that with late cases it does not seem to affect the patient whether irrigation is used or not. (2) That drainage is probably the safest plan. J. H. SARRIS

Case J. T. X-Ray Observations on Colonic Peristalsis and Antiperistalsis, with Special Reference to the Ileocolic Valve. *Med. Rec.* 1914. Vol. 415. By S. R. Cyrc & Ch. I.

Owing to the abundant material afforded him as roentgenologist to the Battle Creek Sanitarium, and to St. Luke's Hospital, Case has examined in the last thirteen months, 1,500 individuals by means of the X-ray following a barium meal. By means of memoranda dictated at the moment by roentgenograms or by tracings he has recorded the peristalsis in over 60 cases in which visible peristaltic waves have actually been seen during the fluoroscopic screen examination.

In 11 cases antiperistalsis was observed. The antiperistaltic waves in most cases originate in the transverse colon near the hepatic flexure proceeding toward the caecum usually disappearing at a point corresponding approximately with the ileocolic junction. Antiperistalsis has also been seen below the descending colon especially in cases of chronic acute bowel obstruction.

Case observations convince him of the existence of a retrocontraction in the right half of the transverse colon. The location of this tonic ring varies with the activity of the pro-motile colon but usually it is at a point near the middle of the right half of the transverse colon.

His attention to a phenomenon previously described by him as a sign of serious bowel obstruction viz exaggerated antiperistalsis. In the case of carcinoma of the colon he has studied this phenomenon exaggerated antiperistalsis has been found. It has occurred in all parts of the colon. It has also been recognized in spastic constipation and in benign obstructions of the bowel.

In every case following leucomyotomy studied by the writer retrograde peristalsis was observed in the left half of the colon.

Mass peristaltic waves first described by Holzknecht who reported two cases are further studied by Case and during the last sixteen months he has seen mass peristaltic movements in 37 different

individuals. The bowel contents suddenly lose their haustral markings and are formed into an ovoid sausage-shaped mass with perfectly smooth edges rounded at the ends. This mass travels at about twice the rate of peristaltic waves in the stomach the distance traveled varying from three to four inches to several feet. After coming to rest the mass regains its haustral markings the time required for the reappearance depending upon the consistency of the bowel contents—quickly if the content be semi fluid more slowly if the bowel content is of firmer consistency.

Massage and mechanical vibration were carefully studied in a number of cases. The immediate effects observed have been a deepening of the haustral contractions and sometimes the appearance of antiperistaltic waves. The conclusion was reached that the well recognized favorable influence of massage and mechanical vibration on bowel motility must be produced indirectly through increasing the tone of the bowel muscle rather than through any actual mechanical pressure of the bowel contents onward. To produce any true electrical stimulation a bipolar electrode must be employed.

Case gives special attention to the study of the function of the ileocolic valve believing that our present knowledge of the antiperistaltic function of the colon demands all the more a recognition of the normal competency of the ileocolic valve. In the 1500 cases above referred to incompetency of the ileocolic valve was found in nearly 250 instances or one in six. Such a large proportion of incompetent ileocolic valve cases is explained by the fact that the 500 cases were gastro intestinal cases submitted for bismuth meal study and hence the presence of ileocolic valve incompetency might be expected in a relatively large proportion of cases.

Case emphasizes the fact that the old idea that insufficiency of the ileocolic valve produced diarrhoea is erroneous and that on the contrary in most cases the opposite condition is present viz constipation. Present knowledge of the antiperistaltic phenomena in the colon makes it easy to understand why ileal stasis and constipation are found rather than hypermotility when reflux from the colon into the ileum is no longer prevented by a competent ileocolic valve.

While it is generally recognized that rectal alimentation is on the whole unsatisfactory there are enough cases of successful rectal alimentation to warrant the continuance of the practice. Case believes that these instances of rectal alimentation are cases of ileocolic valve incompetency.

## LIVER, PANCREAS AND SPLEEN

Mann A T. A Rubber Tube in the Reconstruction of an Obliterated Bile Duct. *S & Gy & Obst* 1914, 11, 36. By Surg. Gynec. & Obst.

A rubber tube was used in a young woman of 28 years in whom the common bile duct had become obliterated as the result of cicatricial contraction

following infection and sloughing due to gall-stones removed together with the gall bladder at a previous operation two years before.

About four months after leaving the hospital a slight jaundice began which gradually deepened and changed in type until the patient had the bronzed color of a Mongolian. At the second operation all landmarks in the region were found obliterated by rather dense adhesions. Nothing was left of the common duct except a little thickened connective tissue.

One end of a  $\frac{1}{4}$  inch rubber tube  $1\frac{3}{4}$  inches long was inserted into the convex surface of the mobilized duodenum which was then inverted by three circular linen sutures as in the Kader Senn operation for gastrostomy to form a papilla which might later act as a valve and close under the intraduodenal pressure during peristalsis and to prevent regurgitation into the bile ducts and the consequent infection of the ducts. The other end was inserted through an incision into the stump of the common hepatic duct. The duodenum and the hepatic stump together with the surrounding connective tissue were approximated with two mattress stitches one on either side. A drain of rubber tissue was inserted down to the region but not into actual contact.

Five months after operation the patient had gained 33 pounds had lost her deep jaundice and the whites of her eyes were clear. X-ray showed that the tube had been passed.

Hutchinson R and Bland Sutton J. Discussion on Enlargement of the Spleen in Children. *Proc Roy Soc Med* 1914, Sect Dis Children 41. By Surg. Gynec. & Obst.

Hutchinson opens the discussion by suggesting the following grouping of this condition:

- 1 Tumors
- 2 Infections typhoid ulcerative endocarditis malaria tuberculosis lymphadenoma chronic arthritis
- 3 Chronic venous congestion
- 4 Metabolic disorders
- 5 Blood diseases leukaemias, chloroma congenital anaemia with splenomegaly and jaundice
- 6 Splenic anaemia of adult type
- 7 Syphilitic in infancy in childhood
- 8 Splenomegaly with acholic jaundice
- 9 Splenomegaly with cirrhosis of liver
  - a Portal cirrhosis
  - b Biliary cirrhosis
  - c Syphilitic cirrhosis
  - d Bant's disease

Congenital obliteration of the bile-ducts. It will be noted the classification is mainly a clinical one without any pretense of being strictly logical and that there is some overlapping between the different groups.

Hutchinson does not believe that syphilis plays a very important part in the etiology of this condition. He also believes that splenectomy is curative in

cases of splenic aneurysm of the adult type and in acholic jaundice though the comparatively benign course of the latter renders it questionable whether operation is justified unless under exceptional circumstances.

BLAND SUTTON discusses the present knowledge regarding the function and pathology of the spleen. He states that little is definitely known of the physiology and pathology but still a working hypothesis is now available for the surgeon. The enlarged spleen associated with numerical reduction of the red corpuscles in splenic anemia in children is due to functional overactivity of the spleen. The enlargement is due to the accumulation of the products of hemolysis which produces an acholic jaundice. Giant spleens and wandering spleens in adolescents are the result of changes which begin during infancy and slowly progress with the growth and development of the patient. The author cites a case in which splenectomy cured the condition.

While his facts are few Bland Sutton believes that the spleen may be removed from children without interfering with their growth or development. He cites a patient operated at 5 years of age who developed normally and is now in the best of health 18 years later. The technique of the operation is briefly described.

The most extraordinary feature connected with splenectomy is the rapidity with which the normal numerical proportion of the red corpuscles is re-

established—sometimes in a few weeks. The removal of a leukemic spleen always ends in disaster.

SUTHERLAND states that surgical procedures in splenic anemia of infancy have gone ahead of pathological knowledge for the exact nature of the disease is not yet known. Splenectomy clearly means the relief of all symptoms and cure of the patient.

There seems to be some familial tendency in splenic anemia. The symptoms are sufficiently definite to establish a diagnosis after the first stage has passed. While opinions differ as to the nature of the disease and the disturbance produced Sutherland believes it is due to an excessive destruction of the blood cells in the spleen. The blood vessels in such a spleen are markedly dilated and the organ may be said to be imbricated with the exuberance of its own blood supply and causes a destruction of the blood corpuscles. It is assumed that there is not necessarily any disease in the spleen but only a disturbance in certain of its functions from hyperemia. This accounts for the varying conditions present in family cases. The congenital defect may be referred to the vascular supply of the spleen and according to the degree of that defect some cases have no symptoms others are mildly affected while still others show progressive symptoms leading to death from excessive blood destruction. The author then briefly cites two cases cured by splenectomy. T. WARD L. CORRELL.

## SURGERY OF THE EXTREMITIES

### DISEASES OF BONES, JOINTS, MUSCLES, ETC. GENERAL CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Cohn I and Mann G. Osteogenetic Function of Periosteum and Bone Transplants. *J. Amer. Med. Soc.* 44: 11. Surg. Clin. N. Y.

After briefly reviewing the theories which have been held regarding the regeneration of bone the authors summarize the information which has been obtained from their experimental work.

Free bone transplants minus periosteum placed in muscle, omentum, spleen, thyroid gland and the anterior chamber of the eye have shown active evidence of proliferation of new bone. The transplant into the anterior chamber of the eye was done more than nine months ago. In no instance has the transplant been absorbed.

Periosteum has been transplanted as a band around the carotid artery into muscle and into the anterior chamber of the eye and in no instance did it show an osteogenetic function. Before sacrificing the animal in which the periosteum had been used as a band around the artery the vessel was exposed and pulsation observed on both sides of the transplant. Palpation revealed no evidence of obstruction of the lumen of the vessel.

That periosteum is not essential for the repair of defects in bone seems clearly proven by an experiment in which both tibiae of an animal were fractured. On one side the periosteum was stripped from the bone in the neighborhood of the fracture and on the other side the periosteum was left intact. Union resulted on both sides. Further experiments along this line are being conducted by the author.

At present the author believes in the osteogenetic function of the free bone transplant but that periosteum has no osteogenic function but that it is a connective tissue layer in which centers of ossification are laid down. Periosteum is a limiting membrane and a source of blood supply for bone.

Duée F. Experimental Echinococcus of Bone (Echinococcus oocystae experimentale). *C. M. P. rend. Soc. d'Hist. Nat.* 914: 177, 378. By Journ. de Chirurgie.

In a previous note Duée has published a case of experimental echinococcus of bone, a double hydatid cyst of the superior and inferior maxilla resulting from an injection of echinococcus into the peripheral end of the common carotid. By a new experiment of the same kind he obtained another rabbit a

double hydatid cyst of the scapula. One of the cysts was developed in the periosteum the other in bone tissue being moulded to the form of the intercommunicating alveolar cavities. The periosteal localization is new and hitherto unknown to pathologists. D. J. says P. FERRIS C. L. E. T.

Fassett: Cardinal Principles in the Management of Bone Tuberculosis. *Northwest Med.* 914 v. 1 35 By S. R. Gynec & Obst.

Relative to the management of bone tuberculosis Fassett says that early and accurate diagnosis is necessary for its successful treatment. The most important sign of bone tuberculosis is involuntary muscle spasm which limits the motion of the joint.

Fassett emphasizes the fact that repeatedly the condition is termed rheumatism because of the mother's statement that the child is run down and acts stiff or limps. The family doctor apparently thinking it of little significance.

He states that bone tuberculosis without mixed infection shows but slight increase if any over the normal temperature of children. Conditions mistaken for tuberculosis have been osteomyelitis chronic infectious arthritis arthritis deformans and developmental abnormalities.

Fassett divides the treatment into six divisions: (1) rest (2) the prevention of deformity (3) fresh air (4) good food (5) the prevention of mixed infection and (6) operation when necessary.

Casts, braces or recumbency with tractors are restful and contribute to a general physical gain with a reduction of toxins introduced into the circulation.

Rest and suitable fixation at the right time will prevent deformity.

The bad results of bone tuberculosis are far less than those following mixed infection.

The author advocates the use of the trocar with aseptic care thus preventing mixed infection. Repeated evolutions are necessary. No tuberculous joint should be incised unless there is an absolute indication for such treatment. The best results have been by the fixation and hygienic treatment. The operation of Lange, Albee and Hibbs have gained favor also.

Fassett deprecates the so-called scraping of the bone which has no place in the treatment of tuberculosis. JOHN H. BURNHAM

Kidner F. C. Diagnosis and Treatment of Chronic Non-Tubercular Joint Diseases—Rheumatism. *J. Mich. St. H. Soc.* 94 60

By Surg. Gynec. & Obst.

The author gives a brief résumé of the symptoms and treatment of (1) infectious (2) atrophic and (3) hypertrophic arthritis.

The infectious type includes all those which originate from infection of the joint structures through the blood stream with bacteria or their products. The joint is swollen, tender, painful and stiff. The periarticular structures are principally

involved. The joints may contain fluid. The X-ray does not reveal any bone changes but may show thickening or atrophy in the periarticular structures.

The treatment of the infectious type includes putting the joint at rest, drawing off the fluid if any exists, preventing deformities by means of splints and removing the cause or focus which causes the infection. This may be located in the tonsils, accessory sinuses, skin, pelvis, gall bladder, large or small intestine, lungs, prostate or epididymis. Autogenous vaccines, serums and phylacogens if applied carefully may be used with benefit. Salicylates are of value in relieving pain and protecting the heart from invasion. Careful massage with active and passive motion should be started when the acute symptoms have subsided. In the more chronic joints forcible manipulation may be necessary or function may be restored by arthroplasty.

Atrophic arthritis begins insidiously usually in the small joints, gradually extending in a more or less orderly manner after months or years to the larger joints.

The affected joints present a fusiform swelling, only slightly tender and not often painful until far advanced. Normal motion is limited but motion in abnormal directions is present. Crepitation within the joint is easily elicited. The X-ray shows bone destruction and erosion of the cartilages. Late in the disease new bone formation begins about the joint which presents the appearance of the hypertrophic type.

Use of the joint in the atrophic type should be encouraged; for if kept in motion the joint will often adapt itself to a position which in fair motion is possible.

Hypertrophic arthritis comes on gradually without constitutional symptoms. It may occur in any joint but the distal phalangeal joints are usually involved which gives a clue to the diagnosis. The periarticular structures are not involved but there are bony prominences which form about the joint and are easily detected by aid of the X-ray. Motion of the joint is painful and limited.

The treatment consists of putting the joint at rest and preventing an increase in the bony outgrowths. An infectious or toxic origin if discovered should be removed. ROBERT B. COFIELD

Gelat E. S. Chronic Multiple Arthritis. *J. Lancet* 94 11 8 By Surg. Gynec. & Obst.

The author advises a most careful search for a focus of infection in the cases of multiple arthritis and believes that a great many cases of so-called chronic arthritis are nothing but the joint manifestation of a chronic indolent infection or the results of absorption of toxic matters from other portions of the body. Several most interesting and instructive cases are cited where foci of infection were found and removed with subsequent improvement and in some cases where joint destruction had not advanced too far there was an entire clearing up of joint symptoms. LAWRENCE J. DAVENPORT

**Tompkins J M:** The Treatment of Rheumatic Infections. *Virg M Sem Month* 1914 xviii 501  
By Surg Gynec & Obst.

The author emphasizes the importance of thorough examination and the removal of sources of infection in all rheumatic conditions where the relationship is apparent. In chronic cases of low opsonin index there should be suspension of dead micrococci isolated from the loci or if these are not to be had stock bacterins are used. Hygienic tonics changes of climate iron and arsenic thyroid and thymus therapy salicylates and hexamethylen diamine are useful aids. Elimination by baths diuretics salicylates and large amounts of H<sub>2</sub>O are recommended. Symptomatic treatment for pain rest and orthopedic treatment of the usual kind and prophylaxis are briefly mentioned.

HEAVY W. MEYERSON

**Nelson J G:** Acute Rheumatic Arthritis and Allied Infectious Conditions. *Virg M Sem Month* 1914 xviii 497. By Surg Gynec & Obst.

The author classifies the above into the three following groups:

1 Acute rheumatic arthritis, occurring alone or complicated or followed by inflammations of serous or mucous membranes tendon sheaths spondyroses chorea etc.

2 Acute rheumatic inflammations of the tonsils serous and mucous membranes, chorea, etc. without arthritis.

3 Acute arthritis with a definite infected area in some other portion of the body such as tonsils gall bladder bowels prostate etc.

After citing a number of interesting cases although claiming no originality for his deductions the author concludes that there is an arthritis due to a definite cocci or strain of cocci which have an affinity for serous membranes spondyroses tendon sheaths etc. and whose source is probably the nasopharynx. The activity of these agents is self limited in any one site. The infected focus of acute and chronic arthritis is usually distant from the joint involved.

HEAVY W. MEYERSON

**Cheate, G. L.** Sprains and Strains of the Knee-Joint. *Practitioner Lond* 1914 xci 35.  
By Surg Gynec & Obst.

The author describes sprains and strains of the knee joint giving special attention to the history method of examination various classes of patients with the pathological anatomy of each case and suggesting methods of treatment.

Sprains and strains of the knee-joint are most commonly caused by overtwisting the articulation with the foot firmly implanted upon the ground fixed or held by other means.

The history of the trouble is that while running after a fall or accident the patient suddenly has a severe pain in the knee and the knee joint locks or there may be no history of locking. The knee is easily straightened by bystanders although the

patient is unable to do so himself. It may be the first or a common occurrence and special inquiry should be made as to the frequency.

Comparison should be made of knees and movements of the joint atrophy of the muscles, local temperature swelling which may be due to edema of soft parts, thickening of synovial membrane or fluid in the knee joint.

Lateral mobility indicates general stretching or rupture of the ligaments.

When the anterior ligament is ruptured stretched, or the insertion torn off the tibia can be brought forward without articulating with the femur. When the posterior ligament is ruptured stretched, or the insertion torn off the tibia can be pushed back without articulating with the femur. When both crucial ligaments are involved the tibia can be rotated internally on the femur.

External rotation of the tibia indicates rupture or stretching of the two lateral ligaments. The quadriceps extensor tendon or ligamentum patellae may be ruptured and the patient be unable to extend the leg.

Every case should have an X-ray photograph taken to show any injury to the bone.

It is very difficult to diagnose the separation of the semilunar cartilage unless it can be felt and then it may be split torn or partially detached. Articular cartilages may be torn off by violence the fringe of synovial membrane may be nipped or broken off and behave as a loose foreign body.

Real locking is due to dislocated cartilage. If it has occurred for the first time the cartilage should be allowed to resume its normal attachments. After the cartilage has been replaced the limb is immobilized about three weeks then passive motion used daily the splint being kept on two weeks more then the injury is treated as a sprain where no locking has occurred.

If locking is due to a loose body it is best to remove the cause but no attempt should be made to do so until the body has been fixed in a suprapatellar pouch. If a foreign loose body is present constant X-ray photographing should be a guide as to its location.

Not too much stress should be laid on absence of locking in determining the presence of the loose body or something nipping between the bones.

Severe sprain or rupture of the ligamentum patellae requires rest (first 24 hours) with plaster bandage and cold application the first hour to arrest hemorrhage then hot fomentations and at the end of 24 hours gentle massage and passive movements which should continue several days. The patient may walk a week but the massage and exercises should be continued.

Where the limb has been kept at rest too long confined with a splint splints and bandages cause swelling and pain occur when the patient gets about and again he is put through the former treatment. At this stage, splints and bandages are useless. There should be no weight on the limb.

except such as is absolutely necessary for at least three weeks and the patient should perform regular specified exercises with a weight pulley or foot dumb bell. After three weeks walking may be resumed and after six weeks golf and tennis may be attempted the patient stopping at the point of fatigue.

The author calls especial attention to the use of the foot dumb bell exercise for strengthening the flexor and extensor muscles of the knee and states that the exercise should be done daily for at least one year.

C. C. CHATTERTOY

Smith, S. A.: Loose Bodies in the Knee-Joint.

*Ca ad M A S J* 1941 209

By Surg. Gynec. & Obst.

The condition of loose bodies in the knee joint has been recognized by surgeons for many years. Loose bodies arise from several causes. Whitlock divides them into those bodies introduced from without those derived from separation of one of the component parts of the joint and those derived from growth or formation of structures not normally forming part of the joint.

In cases where the body has been introduced from without the common intruder is a needle. These cases are rare. In the more important group of cases the body is due to some detachment of a portion of articular cartilage. The internal semilunar is the most frequent source of trouble. In this group of cases there is always a history of injury. Effusion follows and the joint may become locked at the time of injury or at varying intervals afterward when the joint is subjected to increased strain.

In the group of cases derived from growth or formation of structures not normally forming part of the joint there is no history of injury. Organic changes have occurred in the joint the result of which is a congestion and proliferation of blood vessels which cause changes in both cartilage and synovial membrane. As this process increases obliterated vascular changes gradually occur and reduce the blood supply. The result on cartilage is that pieces become detached owing to rarefying osteitis occurring at the chondro-osteal junction whereas the connective tissue of the synovial membrane becomes hyaline then chondrified and finally perhaps calcified.

The diagnosis of bodies of this nature is simplified by means of the X-ray. In cases where the loose bodies are derived from separation of one of the component parts of the joint a radiograph as often as not fails to aid in diagnosis unless the loose bodies have a bony basis.

R. O. RETTER.

Parker, C. A.: Derangements of the Semilunar Cartilages of the Knee-Joint. *Can. J. M.*

*Reorder* 94 22 143

By Surg. Gynec. & Obst.

Parker reports 5 cases operated and in each instance a cartilage was removed. He emphasizes the point that where a joint is opened for the removal

of a cartilage it should be removed unless it is plainly evident that other conditions are responsible for the trouble. This was impressed upon him by his experience in these 5 cases in 3 of which nothing abnormal was observed upon the inspection of the interior of the joint although the removed cartilages showed distinct pathological changes. One case had been operated upon by an eminent surgeon but no cartilage had been removed as nothing abnormal was seen. This patient later gave all the evidence of possessing a defective cartilage that was probably present at the time of operation.

The internal semilunar was affected in all 5 instances the left one 3 times and the right one twice. Fixation of the extended knee in a plaster cast reaching from just above the malleoli to the perineum for a period of six to eight weeks after the operation was practiced the results apparently justifying the procedure as in each instance the recovery was complete with normal function of the joint. Apparently the removal of the cartilage in no way affects the stability of the joint while its presence under pathological conditions is a menace to its integrity. The author prefers the Jones position for operation with the leg hanging over the end of the table.

Williams, R. S. and Wade, W. R.: A Fetid Aerobic Coccobacillus Found in a Case of Suppurative Arthritis of the Knee. (Un coccobacille aérobie fétide dans un cas d'arthrite suppurée du genou). *Compt. rend. Soc. de biol. Par.* 94 LXVI 203.

By Journal de Chir.

The authors had occasion to make a bacteriological study of a case of fetid suppurative arthritis of the knee which had presented a fistula for a long time. They isolated two microbes from the pus a streptococcus and a coccobacillus. The latter on cultivation gave forth the same fetid odor as the knee.

It was a polymorphous non motile coccobacillus varying in form from a coccus to an elongated bacillus. Gram negative strictly aerobic. The colonies developed well on all the ordinary culture media at 37 degrees they were at first transparent and became yellowish on the second day. They liquefied gelatine very slowly at the end of about two months coagulated milk, did not produce indol fermented glucose gelactose and arabinose without the production of gas did not ferment maltose saccharose raffinose lactose or inulin. The cultures were pathogenic for the mouse cobra and rabbit. Injected intraperitoneally they caused death in a short time but injected subcutaneously they caused the formation of an abscess containing a caseous substance at the end of 10 or 15 days.

It is possible to obtain a vaccine against this microbe by immunizing rabbits. A dose of 0.2 of this serum neutralizes a 24 hour culture on agar which is sufficient to kill a cobra weighing 250 grammes in 3 hours. This coccobacillus differs from all fetid microbes known heretofore.

FIERRE CURET



## FRACTURES AND DISLOCATIONS

Cohn I: Fractures of the Greater Tuberosity of the Humerus. *N. Orl. M. & S. J.* 914 1911 670  
By Surg. Gynec. & Obst.

Cohn reports two cases of fracture of the greater tuberosity of the humerus with an outline of past methods of treatment the anatomical data which should act as guide in the treatment of these cases and gives the method of treatment adopted in cases observed.

Believing that anatomic data is overlooked in these conditions he reviews the insertion of muscles attached to the tuberosities. In view of this information the following treatment is advocated: Abduction and external rotation of the arm to favor apposition of the fragments and to overcome the action of the subscapularis which has a tendency to lacerate the capsule and thereby favors dislocation. Further external rotation favors apposition of the shaft with the tuberosity over which we have no control. Abduction also relieves the pressure on the tuberosity by relaxing the deltoid.

One of the cases a patient aged 50 had fallen forward on the shoulder. The chief symptom was pain, particularly on pressure over the tuberosity. External rotation was impossible and abduction was markedly limited.

Both cases mentioned recovered with perfect function in the shoulder.

Delatou II B: A Review of Cases of Fracture of the Patella. *T. Am. Surg. Ass. N. Y.* 944 April  
By S. R. Gynec. & Obst.

The author calls attention to the controversy a decade ago as to whether the open operation was necessary and that now as far as the patella is concerned surgeons are united on the early operation but as regards the long bones opinion still differs.

In the report there were 87 patients with a total of 10 fractures. Three were simultaneous fractures of both patellae and in one there was also a fracture of the cervical vertebra. On these cases there were 96 operations with no operative mortality and in all useful joints resulted in motion was somewhat limited. The operation consisted in a curved transverse incision across the knee above the patella suture of the tears in the lateral capsule and across the front of the patella with chromic catgut. These were reinforced by a suture passed through the patella tendon above and then below in mattress fashion and then tied. The object of this suture is to relieve the transverse suture of strain when there is contraction of the quadriceps muscle especially when recovering from anesthesia.

Stress was laid on the early use of passive motion. A posterior splint is recommended to be worn for at least twelve weeks but this is removed at night so that active movements may be practiced when there is no fear of strain.

Operation was usually performed at the end of 48 hours but occasionally for some special reason it was

delayed for a week. The results where the bone was broken in several fragments were just as good as in the simple transverse cases.

## SURGERY OF THE BONES, JOINTS, ETC.

Owen II R.: Arthroplasty of the Shoulder. *Phila.* 1914, lx 426  
By Surg. Gynec. & Obst.

Various operations for mobilizing ankylosed joints have been done since 1826 but none can be said to be always successful. The latest idea is the interposition of fascia and fat after separating the fragments. This is best for the knee and hip joints because they are weight bearing joints and the hygroma formation which takes place as a result of the fat is very desirable. In case of shoulder elbow or mandible however the use of animal membranes such as chromicized pig's bladder peritoneum of ox or wall of ovarian cyst is to be preferred for interposing. Indications for arthroplastic operation for ankylosis depend largely on what joint is involved. In case of a hip shoulder or elbow operative effort should be made toward mobilization since these joints are almost useless if stiff. An ankylosed knee on the other hand if in a reasonably good position should be left alone.

W. A. CLARK

Woodward C.: Treatment of Fractures by Direct Extension of the Fragments. *Practitioner* Lond. 1914, cx 360  
By Surg. Gynec. & Obst.

The author reviews briefly the advancement in the treatment of fractures in recent years. He mentions the anatomical operations of Lane, the tension methods of Codvilla, massage and mobilization methods of Champoumierre and with great detail describes the Steinmann apparatus, the method of using and its advantages.

The Steinmann apparatus consists of steel pins three and one half to five millimeters in diameter long enough to extend about two inches from the skin on either side of the limb. A plate is made to attach to the end of the pins upon which a cord is fastened to make extensions after the pins are driven through the os calcis.

The technique of dissection of the skin, insertion of the pin, treatment of skin puncture, position of limb, the direction of pull, amount of weight, duration of tension, lateral displacement and rotation of limb removal of pin and after treatment are carefully considered.

The advantages of the Steinmann method of direct extension, the author claims are many. Direct extension is vastly superior to the adhesive plaster method. Shortening is overcome, the fragments are brought more easily into correct alignment. There is practically no pain after tension is once applied. There is no danger in the operation when it is carefully done. It is much easier than the Lane method and the anatomical results are all that could be desired. CH. TROTTER

## ORTHOPEDICS IN GENERAL

Saunders, E. W. Meisenbach R. and Wisdom W. E.: The Causation and Prevention of Infantile Paralysis. *J Mo St M Ass* 1914 2 305 By S rg Gynec & Obst

The authors cite a composite picture of fatal disease with paralysis occurring on a farm among the fowls, hogs and other domestic animals and at the same time one of the farmer's children being afflicted with infantile paralysis. The authors claim to have found a common cause of such maladies in a virus which is carried by a species (*Lucilia caesar*) of green fly. They find that all attempts to inoculate fowls, guinea pigs or other animals with the blood or tissues of animal dying from ingestion of the specific larvæ have failed.

The death of a fowl or guinea pig within six hours has been caused by the oral administration of a single specific larva or by the intraspinal injection of a few drops of emulsion of a specific larva. Paralysis and death was also produced in monkeys by administering the larvæ to them. They were able to transmit the disease from one monkey to another by intraspinal injections of cerebrospinal fluid or of spinal cord emulsion of affected monkeys.

Two days after feeding on the carcass of a poliomyelitic fowl or other animal the green fly deposits ova in the carcass which develop into the toxic larvæ. It is assumed that there are three factors (1) A potential virus (2) an active virus and (3) a neurolytic toxalbumose. The green fly as a carrier explains the prevalence of the disease in summer the fly season. The authors report numerous experiments upon which they base their conclusions and urge that precautions be taken to prevent contamination of food by flies.

W. A. CLARK

Cooley E. L.: Tipes or Club-Foot. *Med Fortnightly* 914 xl 97 By S rg Gynec & Obst

The author thinks that the diagnosis of equinovarus is easy but it is another thing to properly estimate the degree of deformity upon which to base an intelligent prognosis.

Club foot may be roughly divided into three stages from the standpoint of mobility. In the first degree a certain amount of manual correction can be attained without eliciting pain. In the second pain is always associated with such attempts and in the third no correction is allowed without an anæsthetic.

All types and degrees of this deformity can be benefited by present day methods while in mild and moderately severe cases the deformity can always be made to approximate the normal in appearance and function.

The treatment depends on (1) the age of patient and (2) the nature of the deformity. Mechanical methods manipulation, wedges, wrenches, etcetera, may be successfully used in practically all cases. The knife is used only as a last resort.

There are three steps in the corrective procedure (1) correction of the overpronated tarsus (2) correction of the rotation of the bones of the ankle and (3) correction of the equinus. As for the first step cases taken before the patient walks can be reduced by manual means alone. In older cases it may seem expedient to divide the resisting fascia in order to hasten the process. The second step requires a wedge and in older cases a wrench. When it comes to correction of the equinus which is left to the last tenotomy saves time and trouble. But the author considers it malpractice to tenotomize and simultaneously overcorrect in plaster. He advises open operation, with a suture bridge between the cut ends and overcorrection 6 days later under anæsthesia.

Calcaneus requires a restoration of the arch and correction of the superflexion of the foot. This he says seldom requires more radical measures than manipulation supplemented if necessary by splints or braces. Severe cases may require tenotomy of the tibialis anticus, peroneus tertius and extensor longus digitorum one or all.

To prevent the deformities resulting from infantile paralysis he advises that the limb be immobilized in plaster as soon as the diagnosis is made and held for 6 to 8 weeks. Function should then be reestablished in proper apparatus and restorative agents employed. In complete paralysis tendon transplantation may be indicated but should be used with caution.

Old and neglected cases of club foot practically always require surgical treatment such as the Phelps operation, arthrodesis or astragalectomy.

ALBERT ECKENFRIED

Rugh, J. T.: Paralytic Toe-Drop. Putti's Operation for Its Relief. *A S G Phila* 014 lv 432 By Surg Gynec & Obst

Paralytic deformities of the foot may be corrected surgically by operation (1) on the bones, arthrodesis (2) on the tendons (3) on the skin or (4) by the insertion of silk ligaments. Not every case is one for operation for many paralyzed muscles recover power many years after the attack if strain is removed from them. Arthrodesis is liable to be functionally unsuccessful.

The surgery of the tendons for paralysis introduced by N. Colonna in 1881 is valuable in restoring function but is not always successful because of stretching of the parts. The resection of a portion of skin, as practiced by Robert Jones is of some use in connection with tendon transplantation. The silk ligament insertion is highly recommended but it is urged that living structures should be employed whenever possible instead of the foreign body.

An operation is described as performed by Putti of Bologna who utilizes the paralyzed anterior tendons instead of silk for paralytic toe-drop. The author reports a case successfully operated upon by this method and offers the additional suggestion that when the anterior tendons are so used their

distal ends should be fastened to the heads of the metatarsals to prevent deformity of the toes. The foot is brought to a right angle position the tendo achillis being cut if necessary. A five-inch incision is then made along the tibial crest the tendons of the anterior group separated from each other and cut high at their muscular origin. The distal ends are then pulled through an oblong opening made in the tibial shaft one from one side one from the other alternately brought across the front of the tibia and sutured to each other and to the periosteum. W A CLARK

Test F C. Sag Foot and Flat Foot. *Chicago Medical Recorder* 19 4 xxxv 53 By S R Gynec & Obst.

The author laments the indiscriminate treatment of foot conditions with the commercial foot plate arch-support etc and presents a rational explanation and treatment for these very common conditions.

Sag-foot is a condition produced by a progressive muscular weakening, ligamentous stretching and bone displacement resulting in a sagging of the normal contour of the longitudinal arch with a resultant train of symptoms of which flat foot is one of the last to appear.

Sagging of the arch may be due to an increase of the body weight long continued standing resulting in muscular fatigue and disuse. In children it may be due to a rapid physical growth disproportionate to the muscular strength. The average commercial foot brace is an incentive to muscular idleness and so directly furthers the disability.

The symptoms of sag foot are characterized by foot discomfort disinclination to stand tender spots beneath the arch a shuffling heel-dragging gait and a gradual lowering of the inner side of the longitudinal arch.

The treatment consists of proper muscular exercises, suitable footwear with or without heel and sole alterations to assist in throwing the body weight to the outer sides of the feet—the more severe cases may require forced correction under anesthesia. Properly fitted arch-supports may be worn with advantage during weight bearing but should be gradually laid aside as the muscles become stronger through exercise.

Flat foot is a term applied to that condition in which a shortening and contraction takes place in the calf muscles and plantar flexors of the foot due to modern footwear i.e. high heeled shoes.

The raised heel causes the front part of the foot to be crowded forward in the shoe where the foot is broader than the shoe sole the little toe is lifted above the level of the others the ligaments of the transverse arch stretch the arch sinks, and the metatarsal heads impinge upon the shoe sole causing pain and tenderness and later corns and calluses develop on the front part of the sole the tendo achillis is contracted as is also the plantar tendons and fascia which may cause the longitudinal arch to be raised.

Discomfort from long standing or walking referred to the anterior or longitudinal arch stiffness in gait or more severe disability may result. The treatment consists of a gradual change from high to low heeled shoes proper muscular exercises and pads to support the anterior arch. Tenotomy of the tendo achillis peroneus longus and brevis and subcutaneous division of the bands of plantar fascia are often necessary. ROBERT B CORNIO

Griffith J D: Progress of Orthopedic Surgery. *J Am Med Ass* 1914 lxxv 748. By Surg. Gynec. & Obst.

Griffith reviews the recent advances in orthopedic surgery clearly and concisely including arthritis polyomyelitis, congenital dislocation of the hip, operative treatment of Pott's disease scoliosis, and abdominal viscerotomies. He believes that the bovine form of tubercle bacillus is the most dangerous and is the variety that is principally transmitted by milk. Regarding serum therapy he believes it has come to stay being useful not only in closed but also in open tuberculosis.

Ely Billings Rosenow Woodward and Wallace are quoted regarding arthritis and their theories are briefly reviewed. Howard and Clark are quoted as showing that the virus of polyomyelitis is carried by the house fly and the bedbug but freeing the mosquito of any blame in this respect. He would have the patient during the acute stage of this disease rest in a plaster of Paris bed or some other form of splint to maintain the normal position of the affected members. Other treatment mentioned is tendon transplantation arthrodesis nerve transplantation and anastomosis the last two are believed to be yet in the experimental stage.

The history of the treatment of congenital dislocation of the hip is traced from 1890 when Hoffa advised an open operation down to the present time with mention of Lorenz Calot and Hibbs. The number of complete functional and anatomical recoveries he states average 90 or 95 per cent in unilateral cases and probably about 50 per cent in bilateral cases.

Regarding the operative treatment of Pott's disease Griffith discusses the work of Hadravsky and Albee and believes the fracturing of the bases of the spinous processes with credit to Hibbs, and the split processes with the transplanted tibia between with credit to Albee have been remarkably successful but the time has not yet passed for final judgment. He thinks it is undoubtedly the best treatment for rapid recovery in Pott's disease.

Since its birth orthopedics is said to have had scoliosis as a *filio ore*. Credit is given Abbott for the treatment offering the best results and Goldthwait for the demonstration of the fact that correction particularly of lateral scoliosis in the flexed position of the body is due to blocking of the articular processes of the vertebrae. Forbes treatment which aims at causing the correction of the deformity by the production of its counterpart.

and is undertaken by rotating the patient's thorax on a fixed pelvis in a direction toward the side of convexity of the curve is commended upon but no opinion is given regarding its success. The author

believes the last word in scoliosis has not yet been spoken. In conclusion the author briefly and pointedly discusses Goldthwait's views and treatment of abdominal visceroptosis. H. B. THOMAS.

## SURGERY OF THE SPINAL COLUMN AND CORD

Baldwin S. C.: Scoliosis. *Northwest Med.* 94: vi 38. By Surg. Gynec. & Obst.

After quoting various definitions of scoliosis Baldwin concludes that scoliosis observed at any age in life is a lateral deviation accompanied by more or less torsion and is a deformity of the whole body particularly affecting the spine.

Many causes of scoliosis have been observed viz shortening of a limb results of severe burns pleurisy rib restriction the habit of carrying children improperly over the arm the carrying of heavy loads over the shoulder and faulty position in sitting and standing. He emphasizes the fact that scoliosis is not a tubercular condition.

He elaborates on Wolff's law that prolonged alteration in the function of a joint produces corresponding anatomical changes stating that bone being the densest structure in the body, and being unyielding is constructed according to the function it has to perform. The part pressed upon becomes atrophied and denser while that relieved of weight becomes hypertrophied and loses its density thus bringing about functional adaptability.

The diagnosis should not be difficult. A fixed or flexible spine must be determined also how long it has existed and the course determined before treatment is instituted if good results are to be secured.

In some cases the condition has been less improved by exercises. Braces and jackets have been used to correct the curves but except in a few favorable cases a cure is not to be expected.

Abbott's treatment which is a fixation in plaster in the overcorrected position has convinced the orthopedic profession of its value as a means of correction. A specially devised table is used. The patient is placed on a hammock in the frame and by means of suitable bands secured in position the body is forced into the overcorrected position after which it is fixed in plaster. Fenestrae are cut in order that pads may be inserted between the cast and the body as correction takes place.

The cast is worn for weeks or months until correction is obtained. The last stage of the treatment is the wearing of a removable celluloid jacket together with suitable exercises. JOURN. H. SNOW.

Barthe E.: Typhoid Spondylitis (La spondylite typhique). *Thèse de doct.* Toulouse, 1914. By Journal de Chirurgie.

The first case a patient of 22 had severe typhoid for two months. On recovery there was rigidity of the lumbar spinal column with slight left scoliosis flexion of the column was impossible. There was

pain beginning in the lumbar column and passing around the crest in the pelvis, but no pain of the lower limbs the reflexes were normal. Radiography showed marked decrease in the intravertebral space between the second and third lumbar vertebrae with the formation of bony projections along the edges of the space. A plaster corset was applied for three months and then a fresh one for three more months with complete recovery. The spinal column was still rigid but there was no pain and extensive movement was possible due to compensatory mobility of the adjacent vertebrae.

The second case was that of a cavalry lieutenant who had a violent shock in the sacrococcygeal region from falling on his saddle. Three months later typhoid fever developed followed by complete immobility of the spinal column with pain no deviation was apparent and there was no disturbance of motion or sensation in the lower limbs reflexes were normal. Radiography showed erosion of the second and third lumbar vertebrae. Rest in bed for a month improved the condition but when the patient got up it became as bad as ever. A plaster cast was applied and the treatment kept up for a year. Recovery was complete and has persisted for 8 months. The lumbar column is still rigid but the adjacent vertebrae have acquired a compensatory mobility. Radiography shows bony projections uniting the lateral parts of the bodies of the two vertebrae the intervertebral space is not diminished. L. CAPEITTE.

Oppenheim H. and Krause F.: Successful Operation in Circumscribed Serofibrous Spinal Meningitis and a Study of Diseases of the Cauda (Über erfolgreiche Operationen bei Meningitis spinosa chronica serofibrosa circumscripta, zugleich ein Beitrag zur Lehre an den Cauda-erkrankungen). *Mitt. d. Ges. f. d. Med. u. Ch.* 9: 4. 1915.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The authors bring out some interesting points in connection with three closely related cases. In the first case the cause was beyond doubt trauma. In the second and especially the third case trauma may be assumed particularly as there was no evidence of any other etiology. In all three cases it was the accumulated effect of several traumas.

The chief points in the symptomatology were alike in the first two cases. While the pain as to location character and distribution, suggested sciatica, there were symptoms in both patients that excluded this possibility especially bladder disturbances.

The chief interest in the cases was in the results

of surgical treatment. This consisted in the emptying out of the cerebrospinal fluid the freeing of arachnoid adhesions and the separation of a callus of the dura in the first case. The dura was left open its edges sutured to the musculature and the wound in the soft parts hermetically closed. In spite of the dangerous location of the wound (paralysis of the bladder) both cases healed by first intention. Heshag began in the first case on the second day when the Achilles reflex, which had disappeared reappeared. The third case was complicated by hysteria and morphinism and occasional rises in temperature and the diagnosis was therefore not quite clear. It was assumed that it was a case of an organic lesion in the region of the upper lumbar

vertebrae with contraction of the spinal canal and obstruction of the fluid, or an adhesive chronic serofibrinous meningitis in connection with a meningeal hemorrhage. It was doubtful whether the process was localized in the region of the medulla, the upper lumbar vertebrae or the point of exit of the cord.

On laminectomy of the eleventh and twelfth thoracic vertebrae there was marked increase in the fluid and chronic arachnitis. After emptying the dura and keeping it open the wound healed promptly and there was improvement in the pains. Later the functional disturbances disappeared, but there were frequent recurrences for a while and then definite recovery.

HANS BÄCK

## SURGERY OF THE NERVOUS SYSTEM

**Coville** Spastic Paraplegia in Children Treated by Van Gehuchten's Root Section (Observations de paralysies spasmodiques infantiles traitées par la radicotomy au ant le procédé de Van Gehuchten *Bull et mem Soc de chir de Pa* 1913 xxxix 1565 By *J. J. J. J. J.*)

Coville describes the following three cases of spastic paraplegia in children treated as above:

1. A child of 11 was afflicted with extreme spastic paraplegia of the lower limbs and talipes equinovarus. The results of tenotomy were unsatisfactory and Van Gehuchten's operation was performed consisting of resection of the spinous processes and laminae of the twelfth dorsal and first second and third lumbar. There was an unexpected recovery. At the end of six months after muscular re-education the patient could walk with the aid of two canes the position of the feet was normal.

2. The second case was that of a boy of 18 with spastic paraplegia of the lower limbs. A similar operation to the former case was performed but at the end of a month the child began to cough and soon died of pulmonary tuberculosis.

3. The third case was a child of 6 who could not stand upright. There was extreme talipes equinus and the child was mentally defective. Operation was performed, followed by uneventful recovery. Muscular re-education was ineffective the patient could stand upright but could not walk.

Coville comes to the following conclusions with regard to the operation. It is very simple technically and not at all dangerous but it must be performed somewhat blindly for though the topography of the roots to be operated on is known it is impossible to tell whether too much or too little is being removed. The results are not so good as might have been expected from the published reports for though the spasticity and the exaggeration of the reflexes disappear relearning to walk is very difficult the steps remain slow and hesitating the limbs are heavy stability uncertain and with the lapse of time it seems that the good effects decrease rather than the opposite. Root section cannot compete

with purely orthopedic treatment in Little's disease and he believes that he was not persistent enough in the post-operative treatment. J. DUNOYER

**Antonini L.** Bilateral Intrathoracic Resection of the Pneumogastric and Its Relation to the Pathogenesis of Round Ulcer of the Stomach (La résection intra thoracique bilatérale de pneumogastrique et ses rapports avec la pathogénèse de l'ulcère rond de l'estomac) *Riforma med* 1914. N 516 By *J. J. J. J. J.*

Antonini performed his experiments on rabbits dogs and cobras. He used Meitzner's method of anesthesia as it presented the great advantage of immobilizing the animal and of preventing contractions of the diaphragm and respiratory movements. An incision was made in the seventh or eighth left intercostal space and the pleura opened care being exercised to avoid injuring the lung. The right and left pneumogastrics were discovered and resected at a height of 1 cm in the rabbit and of five in the dog. Anesthesia was discontinued only after the wound in the thoracic wall was completely closed. Forty experiments were made. There was no mortality among the dogs and only a slight one among the rabbits. He concludes as follows:

1. Bilateral intrathoracic resection of the pneumogastrics may though rarely produce a gastric ulcer with the macroscopic and microscopic characteristics of peptic ulcer in man.

2. This ulcer which shows no tendency to heal, appears in dogs and rabbits in 7 per cent of cases.

3. Examinations were made 20, 25 and 30 days after the operation without finding any tendency to healing.

4. Within the first few days after the operation there was great dilatation of the stomach and vascular repletion accompanied by intragastric hemorrhage.

5. In the animals killed five months after the operation there was no tendency to cicatrization, but a chronic ulcer.

6. The mechanism by which vagotomy produces ulcer is unknown.

CH. VILLARD

## DISEASES AND SURGERY OF THE SKIN FASCIA APPENDAGES

Plain J. C. A Note on the Management of Burns  
*Am J S* 1914, XXVIII, 117

By Surg. Gynec. & Obst.

There are four things to take into consideration in the treatment of burns (1) To combat the shock if it exists (2) to relieve the pain and nervous excitability (3) to prevent infection and protect the exposed living tissue and (4) to help nature in her work of repair

The treatment of shock is just the same when it occurs from burns as when it arises from any other cause. To relieve the pain and nervous excitability the author gives a hypodermic injection of morphine and atropine. In addition he bathes the parts with cool water at about 60° F. to which has been added a teaspoonful of bicarbonate of soda or sodium chloride to each quart of water. This bathing is kept up until the patient is more comfortable or until the hypodermic has had a chance to work. The prevention of infection is very important and should be given vigorous attention.

The author takes exception to two things which

are often recommended (1) The opening of all blisters and (2) the use of carron as a protective dressing. In opening a blister the denuded area is deprived of the non-irritating serum which is less irritating than any artificial medium and the dead epidermis becomes an irritant which favors infection. Carron oil and other similar preparations prevent proper drainage of the burn.

The author advocates the following care of a burn. The entire area and the surrounding parts are mopped or sprayed with hydrogen peroxide and then mopped with dry gauze. Strips of gauze which have been soaked in a 2 per cent solution of picric acid in dilute alcohol are then applied. Over this is applied a thin layer of cotton. This dressing is changed as often as it becomes soiled and each time it is changed the burn is cleansed as before. If sloughing occurs the dead tissue should be removed as rapidly as it becomes loosened. When the oozing has largely ceased the author uses strips of rubber tissue which have been soaked in a 1:1000 bichloride solution.

J. H. SKILES

## MISCELLANEOUS

## CLINICAL ENTITIES—TUMORS, ULCERS, ABSCESSSES ETC

Sutton R. L.: The Histogenesis of Multiple Basocellular Carcinoma. *J Am Med Ass* 9:4 Jan 977

By Surg. Gynec. & Obst.

The author cites the various views of other writers as to the etiology of multiple basocellular carcinoma. He is of the opinion that the embryonal inclusion theory or the influence of the blood vessels play no part in the etiology of this type of tumor. He rather sides with the views of Loeb and Sweek that the formation of carcinoma of the skin depends on a primary increase in the activity of certain parts of the epidermis. Sutton believes that a dry scaly skin predisposes to this condition.

Five case reports are given the ages ranging between 3 and 73 years. In all these cases no epithelial pearls were formed and in the younger cases the tumor growths were superficial and thick, while in the older cases they infiltrated more deeply as the reticulum was not as resistant.

The treatment should be excision failing this roentgenotherapy with or without freezing or cauterization.

ELBERT CARL

Blinnie, J. F. Some Uses of Fat in Surgery. *Surg Gynec & Obst* 9:4 XIII 336

By Surg. Gynec. & Obst.

In spite of its reputation as a tissue of poor resisting power fat is well suited for transplantation. Sometimes its value is due to its connective-tissue basis but at other times its only content is the

valuable element. The following are some of the uses of fat as a transplant.

1. It may be used as an organic plug or tampon to fill wounds in vascular parenchymatous organs such as the liver etc. or it may be spread like a plaster over a bleeding surface in the liver kidney or uterus as a hæmostatic agent. This use of fat is different from the application of free omental grafts to support the suture line in intestinal wounds or to surround and occlude the duodenum as in the author's method of permanently obstructing the pylorus in certain cases after gastro-enterostomy.

2. Taking it for granted that adhesions will form or reform between the scalp meninges and brain after operations for traumatic epilepsy the author has successfully followed Lexer's plan of implanting fat in the cranial defect. This implant does not prevent the formation of adhesions but the adhesions formed are calculated to be so loose and soft as to be harmless. Where a cerebral tumor or cyst has been removed and cerebral expansion does not quickly cause the cavity to disappear a plug of fat may possibly be a suitable tampon with which to fill the cavity. The specific gravity of fat is somewhat less than that of cerebrospinal fluid.

3. Deforming depressed scars of the face may often be remedied by division of the adhesions between the skin and underlying bone the depressed area being filled out or padded by the introduction of a suitable fragment of fat obtained from the patient himself.

4. After mastectomy for non malignant disease

good cosmetic results have been obtained by the implantation of a lipoma (Caerny) a suitable mass of omentum of a pedunculated hernia (Judin) or fat of the neck from any part of the body (Klapp-Hertler).

5 When a cavity is formed in a bone by the removal of disease it may be obliterated by a free transplant of fat. This has been successfully accomplished by several surgeons including the author.

6 Arthroplasty owes its success very largely to fat transplantation. Usually the flaps used are pedunculated but to the author it seems that the rather complicated measures necessary to obtain pedunculated flaps may be found to be unnecessary, as free flaps may be as good or better than the pedunculated.

Fat is very useful in the prophylaxis of crippling adhesions following tenorrhaphy and neurothoraphy.

8 In bronchiectasis pulmonary tuberculosis etc. the implantation of fat between the mobilized parietal pleura and the chest wall (Tuffier) is a valuable substitute for artificial pneumothorax or the Friedrich-Sauerbruch and Wismann operations for producing collapse of the chest wall.

#### SERA VACCINES AND FERMENTS

Rost F and Salto: Use of Serologic Staphylococcus Reactions in Surgical Diagnosis. *Staphylococcus test der serologisch Staphylococcus test in der chirurgischen Diagnostik*. *Deutsche Zeitschrift für Chirurgie* 1913 2 1 330.

The authors regard Hohnmuth's modification of the staphylolysin reaction as suitable for the diagnosis of surgical staphylococci. The staphylococci form a hemolytic film in the body thus so called staphylolysin. This can be demonstrated easily by adding to a bouillon culture of a certain alkalinity on about the tenth day of growth a suspension of red blood cells of the rabbit. As a product of reaction to this lysin antilysins are formed in the body. Neisser and Wechsberg tried to utilize the demonstration of these antilysins for diagnostic purposes. The patient's serum was mixed with the lysin in certain proportions and the red blood-cells of the rabbit added as an indicator. If hemolysis occurred antilysins were not present in appreciable quantities. If hemolysis was inhibited it was due to a strong antilysin content of the serum the latter therefore may be assumed to have come from a patient with staphylococcosis. This reaction was unreliable because too little lysin was taken.

Hohnmuth's reaction increases the amount of lysin and makes the diagnosis surer. Merck prepares a lysin freely titrated so that the technique is very much simplified. It is only necessary to mix a certain amount of inactivated serum (0.5 : 0.35 : 0.25 and 0.1 solutions of 1:10) and a 55 per cent suspension of rabbits erythrocytes (0.5) and add to each tube the latter dose of the lysin. This method should be very useful in the diagnosis

of bone suppurations especially for the differential diagnosis of osteomyelitis and tuberculosis. For some suppurations of the soft parts the agglutination reaction can be used to advantage. Bacteriological attempts as well as the determination of the opsonic index are rejected for purposes of diagnosis.

WOLFSOHN

Wolfsohn G: Principles and Value of Vaccine Treatment (Grundsätze und Wert der Vaccinotherapie). *Mit einer Geschichte der Med. Chir.* 1913 2 1 72. By Journal de Chirurgie.

The author gives a comprehensive work on the principles, value and methods of vaccine treatment including treatment with killed bacteria and the products of their metabolism. He discusses controlling the effect and determining the dosage by reckoning the opsonic index by Wright's method. The indications are different in the three following groups:

1 In general bacteremia including almost all acute infectious diseases sepsis etc. vaccine treatment is useless or even harmful, and therefore contraindicated.

2 This group comprises more or less localized foci from which bacteria may pass over to the blood and which experience has shown that they sometimes do: (a) acute cases such as phlegmon, lymphangitis, osteomyelitis, peritonitis, puerperal parametritis, acute gonorrheal arthritis etc. Vaccine treatment is not absolutely contraindicated but should be used in small and often repeated doses. (b) chronic cases such as chronic colon infections of the urinary passages, tubercular peritonitis, tubercular inflammations of the bone, tubercular carcinoma of the lung, chronic osteomyelitis, chronic gonorrheal rhinitis etc. Vaccine treatment is indicated in those cases in which with reasonable success auto-inoculation can be excluded by placing the diseased focus to rest therefore especially in diseases where the treatment is contraindicated in cases where this is not possible since if there is a too inoculation it is impossible to give accurate dosage—for example in many forms of pulmonary tuberculosis.

3 Strictly localized processes in which the bacteria or products of their metabolism do not pass into the blood as in simple chronic staphylococcosis, the tuberculous complications of gonorrhea etc. are cases in the domain of vaccine treatment. In practice the control of vaccine treatment by the opsonic index is reserved for those chronic strictly encapsulated foci of infection in which it is possible to completely exclude auto-inoculation and when from their location make exact clinical observation impossible. For the other cases this difficult method of control may be omitted. This simplifies the treatment markedly.

After a discussion of the preparation of the vaccines a special part is devoted to methods of use and results in different diseases. Auto-vaccination is not necessary in most of them. Staphylococcus

infectious acne sycosis inflammation of the sweat glands, osteomyelitis mastitis pyemia furunculosis chronic eczema etc

In suppurative acne and general furunculosis vaccine treatment is a hopeful experiment in recurrent inflammation of the sweat glands and of the nasal sinuses it frequently gives good results in osteomyelitic fistulae purulent mastitis and chronic abscess good results are only exceptionally obtained. Streptococcal infections are contra indicated in the very acute cases but are worth trying in the subacute and chronic cases

Tuberculin is to be recommended for tuberculosis (1) When any operation indicated for some reason cannot be carried out (2) for after treatment especially after operations that cannot be performed radically (3) as a supplementary treatment in encapsulated pulmonary tuberculosis lupus beginning arthritis and lymphoma

In gonorrhoea vaccine treatment produces excellent results in acute and chronic arthritis especially in combination with Bier's hyperaemia good results in epididymitis lack of uniformity in the results in pyosalpinx failures in urethritis endometritis and conjunctivitis Caution should be exercised in general infections In gonorrhoea there is always strong reaction

In colon infections autogenous vaccines should always be used There is severe reaction Improvement was obtained by its use in many cases of coliforma but not complete recovery In chronic cystitis and pyelitis the vaccine treatment in conjunction with other methods hastened recovery but in no case was the urine completely freed of bacteria

FRANK

Cholozoff B N Surgical Gonorrhoeal Diseases Sero- and Vaccine Treatment (Chirurgische Gonokokkenkrankheiten Sero- und Vaccinotherapie) B u M Ch 9 3 LXXX 382  
By Zentralbl f d ges Chr Grenzgeb

Faure Beaulieu in 1906 published 34 cases in which cocci were found in the blood during life in general gonorrhoeal diseases the author adds 10 new cases from the literature and one of his own The metastasis generally proceeds from the genito-urinary apparatus sometimes from gonorrhoea of the eye The conditions which bring about the general extension of the local process are as yet unknown

In about two or three per cent of all gonorrhoeal diseases there are complications in the joints more rarely involvement of the tendon sheaths and still more rarely of the mucous bursa the pleura and bones Very rarely there is phlebitis from gonorrhoea The other forms of general gonorrhoeal infection are briefly mentioned Cholozoff found only 11 cases of general gonorrhoeal septicæmia in the literature to which he adds the one of his own. He recommends as treatment passive hyperaemia combined with douches of hot air especially in involvement of the joints and tendon sheaths

Serum treatment does no good in diseases of the mucous membranes but gives good results in local complications such as epididymitis prostatitis, and cowperitis and excellent results in diseases of the joints tendon sheaths pleura etc. Ten cases which the author treated with sheep's serum were undoubtedly favorably influenced

Good results were also obtained with horse serum which has the advantage of not causing any general or local reaction as the author observed in the 10 cases that he treated with horse serum As to vaccine treatment he recommends that it be begun with small doses in order to avoid reaction This method of treatment gives good results without danger In urethritis vaccine treatment is of no use In diseases which are secondary through direct infection from the primarily diseased urethra as in epididymitis cowperitis prostatitis cystitis and ureteropyelitis vaccine treatment undoubtedly has a good effect especially in epididymitis while opinions are divided as to prostatitis The author did not get uniform results There was a marked effect in organs to which the infection was transmitted through the blood or lymph such as joints bones tendon sheaths etc as he showed in the treatment of 36 cases

The views as to the use of vaccine treatment in gonorrhoeal septicæmia are divided Three cases have thus far been treated 2 of Dieulafoy's and one of the author's with good results in all three

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## BLOOD

M'Nee, J W Experiments on Hemolytic Icterus. J Pathol & Bacteriol 1914 xviii, 3 5  
By Surg. Gynec. & Obst.

In recent years the theories on the production of hemolytic icterus which have received most attention are those of Minkowski and Eppinger The former holds that a disturbed function of liver-cells causes an aberrant flow of bile into the blood stream instead of along the bile-ducts, while Eppinger considers that the formation of gallenthromben by causing obstruction leads to dilation of the bile-ducts and rupture into the perivascular lymph spaces

M'Nee's experiments to control those published by Minkowski were carried out on geese these fowls being especially suitable for the purpose. The geese were poisoned with AsH<sub>3</sub> and immediately the liver was removed with the exception of a small stump of liver tissue left behind the vena cava. These geese lived several hours after operation. His conclusions are as follows

1 There is no doubt that after the removal of the liver in geese poisoned with AsH<sub>3</sub> no marked icterus occurs The weak icterus occurring in some of the experiments after removal of the liver must depend either on the functional activity of the spleen and bone-marrow or on continued activity of the small piece of liver left behind the vena cava.

2 The reason why no marked icterus follows



extirpation of the liver is not that the liver cells have been removed but it depends upon the removal of the tissue enclosed within the liver which breaks down hæmoglobin—namely the endothelial cells of Von Kupffer. These cells have to do at any rate with the first phase in the production of bile since they split off the iron part of the hæmoglobin molecule and set free the pigment portion.

3 Neither from the experiments of Minkowski and Naumyn nor from the author's may a definite conclusion be drawn that a true hæmolytic icterus can not occur at all. On the contrary the histological appearances especially the proliferation and desquamation of the Kupffer cells their circulation in the blood stream and their destruction there speak strongly in favor of the occurrence of an icterus without any action of the liver cell at all. The argument that when the liver is removed the homologous endothelial cells in the spleen and marrow do not take up the work is met by the extreme smallness of these latter organs in birds and the short duration of the experiments.

4 An important question is how far these conclusions arrived at by experiments on geese can be applied to human pathology. Experiment shows that the structure of the liver in birds is different from that in higher animals. In birds there is a very special iron metabolism in the liver with which not the hæmatocytes but the endothelial cells lining the vascular pillars have to do.

To compare with these phenomena in geese the appearances produced in hæmolytic rats and other animals I got were poisoned with lupulin and found to be in no way essentially different from those observed in geese. It is to be noted however that the normal structure of dogs is different from that of birds. In dogs the endothelial Kupffer cell is much less numerous and normally give no iron reaction in dogs the liver does not seem to be so directly associated with the iron metabolism as it is in birds. It is likely that in higher animals the spleen has taken on this function. In icterus the endothelial cells of the dogs liver show changes quite similar to those found in geese namely phagocytosis of red blood corpuscles histiogratic of them and appearance of a diffuse iron reaction in the protoplasm. The latter being much fewer in number these appearances are not so prominent and readily recognized. In the spleen the changes seen in dogs and geese during icterus are also similar but it has already been sufficiently emphasized how much larger the spleen is comparatively in higher animals than in birds. The lymphatic glands of dogs the changes are also very marked and are of a similar nature to those found in the spleen. In the geese it was generally difficult to find lymphatic glands, hence no observations were made on them.

Taking all these points to consideration, it seems quite probable that all that has been suggested in connection with theiology of hæmolytic

jaundice in geese can be applied to higher animals and to man.

LEO G. DWAN

Wallace R.: Post Operative Thrombophlebitis.  
*Am J Surg* 1914 27:111-103.

By Surg. Gynec. & Obst.

Thrombophlebitis follows in 1 to 2 per cent of all abdominal operations the veins chiefly involved being the external iliac the common iliac, the femoral the saphenous the mesenteric, and the portal. A study of the statistics in a large series of cases makes clear the following definite facts. Post-operative thrombophlebitis occurs almost exclusively after abdominal operations it occurs frequently in clean cases it occurs in about one-third of all statistical cases in myomectomies. In the majority of cases it occurs in the femoral vein and on the left side.

It is doubtful whether any one cause can be ascribed in all cases, but certain predisposing physiological factors are always present. The peripheral venous circulation is comparatively sluggish the venous coats are thin and easily permeable their superficial distribution submits the veins to outside injury venous blood presents a greater coagulability.

Kellerg concludes from experimental work that infection is in the natural clot behind a ligature or traveling from stitch abscesses through the epigastric veins is the prime cause while Clark believes that traumatism of the deep epigastric vein causes the primary thrombosis which progresses to the external iliac. The author believes there are two primary factors viz traumatism of the abdominal wall and infection of the incision and concludes from a consideration of the clinical symptoms that these two theories are wholly tenable. He accounts for the preponderance of left femoral vein thrombosis by bacterial colonies gaining the arterial circulation and eventually reaching a traumatized or diseased vein wall.

The preventive treatment may be summed up in strict asepsis the avoidance of trauma and of long dead spaces within the chest per luminary treatment of subjects with flabby musculature by massage early bowel action and frequent change of position. But there will still remain a few cases due to undetectable endovenous infection against which there is at present no available means of prophylaxis.

E. K. LAUSTROFF

#### BLOOD AND LYMPH VESSELS

Kempe, G. Brachial Arteriovenous Anastomosis Treated by Vascular Suture. *Proc Roy Soc Med* 1914 Surg Sect 83.

By Surg. Gynec. & Obst.

The patient was 56 years old for two years had noticed a swelling sensation in his right arm. Inspection showed a large pulsating swelling in the arm just below the anterior axillary fold and in the line of the brachial artery. It was increasing in size but was not painful. The swelling was soft and

compressible and pulsated regularly. A thrill which was easily felt, was a continuous one, but had a systolic increase in intensity. The swelling could be traced into the axilla and a soft pulsating swelling was found beneath the right clavicle where a similar thrill could be felt but less marked than in the arm. Pressure on the subclavian artery above the clavicle caused a collapse of both swellings and a cessation of the thrill. Release of the pressure caused the swellings to fill up slowly but they required several pulsations to become as full as before. Pulsation in any of the superficial veins of the arm forearm or thorax could not be detected. The influence of respiration on the swellings was not noticed. The right radial pulse was less full than, and in time rather behind the left. A humming low-pitched bruit with high-pitched systolic accentuations could be heard over the swelling. There was no evidence of intrathoracic aneurism.

The case was typically one of arteriovenous aneurism. A dissection showed a communication between the upper part of the brachial artery and the inner of the venae comites. The parts were cleaned and the artery and vein were clamped separately above and below the anastomosis the connection between the two being then severed. The arterial opening was closed with two layers of fine sutures 000 silk and a round needle being used. The opening into the vein was closed with 00 catgut.

The after treatment was rest in bed and morphia. A good result was obtained. The radial pulse on the affected side was ultimately weaker and the blood pressure was 20 mm Hg less than on the sound side. The author thinks that laminated fibrin was laid down over the arterial suture and this resulted either in closing the artery completely or considerably narrow. J. H. SARRIS

Meyer F: Treatment of Varicose Veins by Rindfleisch's Method and Its Results (Die Behandlung des varikösen Sympt. m. Komplexen nach Rindfleisch's Friedel und deren Erfolge). B. u. s. k. Ch. v. g. d. lxxix 376

By Zentralbl. f. d. ges. Chir. Grenzgeb.

The operation was performed on 24 patients on both legs in 6 of them. The technique was as originally described. The chief emphasis is laid on the wide separation of the edges of the wound and as numerous ligations of the veins as possible in order to avoid secondary hemorrhages. The dressing consists of tamponing pressure bandage and elevation of the limb. There is pain for the first few days and on the first changes of dressing. One of the chief points in the after treatment is to delay healing by removing the new granulations every second day. The spiral incision is begun above or below the knee according to the extent of the varices. The saphena should be incised and ligated several times.

The results of this method are due to the almost complete annihilation of blood and vessel wall pressure by interrupting the course of various veins

and to the removal of fluid from the region operated on by the opening of lymph and tissue spaces and to the disappearance of all symptoms of inflammation. The duration of the treatment varies from 6 weeks to over a year. Eighteen of the patients had ulcer of the leg and in addition to the operation the ulcers were incised. There was definite cure in 54.16 per cent persisting after a year in 41.66 per cent. In some of those that were not cured there was no marked dilatation of the superficial veins so that varices of the deep vessels were suspected. Parona recommends in such cases the ligation of the popliteal vein. The results are much better in pure varices. All 6 of the patients were cured and remained so a year after. WEICHERT

Sherrill J. G.: Direct Suture of the Brachial Artery for Traumatism Restoration of Circulation; Subsequent Development of Ischemic Paralysis. *Old Dom. ion J.*, 1914, xvii 113.

By Surg. Gynec. & Obst.

The following case of ischemic paralysis is reported by the author.

A young man 23 years of age had his arm caught and twisted in a centrifugal machine, in such a way that a backward dislocation resulted at the elbow. When seen an hour later he complained greatly of pain there was a marked purple swelling in the forearm and the radial pulse was absent there were no symptoms of a false aneurism. Both bones of the forearm were dislocated backward but the skin was unbroken. After three hours treatment there was no improvement in the circulation but the pain swelling and discoloration increased. At operation the humerus which was lying in front of the coronoid process of the ulna was restored to its position. The ends of the brachial artery stood forth prominently in the wound both being filled with blood clots no fresh blood being present. The clots were removed and a Crile clamp placed on the distal and proximal ends of the vessel. The sheath of the artery was torn away from the distal portion and had contracted somewhat over the proximal end. This was held out of the way while the vessel itself was sutured. The method of Carrel was employed. The median nerve was exposed in the wound but was apparently uninjured. The skin was closed without drainage and the arm put up in partial flexion. Within five minutes after the vessel was sutured, circulation had returned in the hand although the radial pulse was not felt. Later it was fully restored.

The patient made a somewhat protracted convalescence and was disturbed some by numbness in the fingers which was thought to have resulted from stretching the median nerve. In dressing the arm great care was used to prevent constriction of the circulation. The patient had some slight impairment of motion at the elbow and also partial interference with pronation and supination. A contracture took place in the forearm and hand which simulated that resulting from ulnar paralysis.

Early forcible correction of the deformity was accomplished but always with considerable pain to the patient. Subsequently the wrist became more firmly fixed and the tendons contracted so that attempts at restoration were ineffective. Heat sensation also was absent. At a subsequent operation the ulnar nerve was found to be normal and the contracted tendons were cut. Slight improvement was noted in the sensation of the fingers and the deformity was considerably less. The electrical findings showed degeneration of the ulnar nerve and muscles of the forearm and hand. Massage the application of heat passive motion and the employment of electrical stimulation have all been used on this patient.

The author discusses the case and concludes that the mechanical atrophy and paralysis may occur as the result of arterial interruption which must be nearly or quite complete and usually of over two or three hours duration.

EDWARD L. CORNELL

### POISONS

Lukas J: Presence of Tetanus Germs in the Excrement of Horses (Über das Vorkommen der Tetanuskeime in den Exkrementen des Pferdes). *Ztsch f Tiermed* 9, 4, xviii. 7.  
By Zentralbl f d ges Chir u Grenzgeb

Among 17 horses the author found tetanus spores in the excrement of 16 which confirms the results of his previous experiments showing that tetanus germs are almost always discharged with the feces of our large domestic animals. This explains their wide distribution. Lukas gives his own experience in growing the bacilli with independent improvements in the method. He calls attention to the pseudo forms of the tetanus bacillus which cannot be distinguished from the true *Nicolaier Kitasato* type morphologically but only by animal experimentation.

KARL TREX

Franz, V: Intravenous Injection of Corrosive Sublimates in Septic Diseases (Über intravenöse Sublimatinjektionen bei septischen Erkrankungen). *Beitr z H. Chir* 9, 4, lxxviii.  
By Zentralbl f d ges Chir u Grenzgeb

Franz experimented in 20 cases with intravenous injections of 1:1000 bichloride solution in doses of 10 ccm containing, therefore 0.01 bichloride per dose. There was one anthrax infection and 19 streptococcus staphylococcus and colon septic pyemias 7 of them being puerperal general infections.

The blood examination showed streptococci in 8 cases. In 2 of these cases the bichloride injections had no effect while in the other 6 cases the bacteria disappeared from the blood after the second or third injection, 5 of the cases recovered while the sixth died of liver abscess. Of the 11 cases with negative blood findings 5 died among them 3 cases of puerperal infection. Even in the 6 cases which recovered Franz thinks the beneficial effect of the bichloride was questionable.

In the anthrax case which recovered, no bacteria were demonstrated in the blood. After the first injection the temperature sank and improvement began but Franz does not feel sure that the improvement was due to the bichloride. He thinks that it is definitely beneficial only in the cases of bacteremia, and in such cases he thinks it worth trying when other harmless methods fail. Great caution should be exercised, however in the use of such injection as it is by no means harmless and should be used only when there are special indications.

There were no serious by-effects in any of the author's cases. The blood was not harmed in any way by the 1:1000 solution. Even when 46 cc was used within 72 hours and 8 cc within 192 hours there was no injury to the kidneys but in 50 per cent of the cases there was diarrhea and pain in the abdomen. In the fatal cases the bichloride was never the cause of death.

M. VON BRAUN

### SURGICAL THERAPEUTICS

Kolbé: Intravenous Treatment of Hydatid Cyst by Arsenobenzol (Le traitement intra-veineux du kyste hydatique par l'arsinobenzol). *Prog med* 9, 4, xlii, 103. By Journal de Chirurgie.

In a paper read before the Society of Comparative Pathology Kolbé gave a suggestive and interesting paper on the treatment of hydatid cyst with arsenobenzol—salvarsan or even better neosalvarsan, or similar preparations. He showed the dangers of echinococcus infection and pointed out the fact that sometimes, though rarely recovery takes place by spontaneous aseptic absorption of the cyst; the ideal treatment therefore would be to bring about this curative process by some simple means, or to destroy the embryos before the cystic period. He suggests utilizing for this purpose the parasitocidal effect of arsenobenzol which has already been demonstrated on spirilla, trypanosomes, filaria etc. It is logical therefore to count on its sterilizing effect on cestodes especially *tenia echinococcus*. This is no longer a mere hypothesis, for it has been confirmed in two cases by Prof. Roux of Lausanne. Kolbé reports these cases in detail. In both cases a week after an intravenous injection of arsenobenzol there was a rise of temperature and the discharge through an incision of a turbid cystic fluid slightly purulent and the vesicles showed necrosis.

There is some danger in the sudden necrosis of large cysts followed by upstagnation therefore it becomes important to diagnose the presence of echinococcus early before the surgical period. Among the new laboratory method for accomplishing this purpose may be mentioned radiology which though still imperfect aids greatly in the early diagnosis of hydatid cyst of the lung and liver. Gradually the absolute and relative indications for the use of arsenobenzol will be established and in order to establish them experiments should be performed on domestic animals spontaneously or

voluntarily infected with echinococcus. By means of such experiments it may become possible to sterilize the dog and cat against echinococcus for it is well known that they are the most dangerous agents in propagating it. In the discussion Weinberg of the Pasteur Institute of Paris declared that recently one of his colleagues had succeeded in making cysticerci in rabbits disappear by the injection of modified 606 which confirms the new therapeutic method experimentally. J OXNCEVC

Schiassi B. New Physiological Solutions (Nouvelles solutions physiologiques) *S. m. m. m. d.* 1913 xxx 589 By Journal de Chirurgie

It is admitted that the so-called physiological solution of 0.75 per cent sodium chloride given for the purpose of overcoming intoxication on the contrary often aggravates the condition of the patient. In some cases after the administration of this saline solution there is an increase in blood pressure and diuresis but sometimes there are signs of progressive and irremediable adynamia. The sodium chloride absorbed from the solution causes an impoverishment of the cellular elements of the tissues depriving the nerve tissue especially of calcium and potassium the calcium sometimes being decreased fifty per cent. As calcium has a tonic effect on the nervous system, it may readily be seen that copious injections of saline solution might depress the nervous system. Moreover this degree of concentration of sodium chloride may injure the kidneys on which the work of elimination devolves.

Therefore Schiassi has devised two new physiological solutions one for subcutaneous and intravenous injection the other for rectal installation by the drop method. They are to some extent a combination of Ringer's and Locke's solutions and the amount of sodium chloride is markedly decreased—(6.50 per 1000 instead of 7.50 per 1000) in place of the sodium chloride a certain amount of potassium is added and also of calcium which in addition to its tonic properties facilitates coagula-

tion of the blood which may be of great service in surgical diseases. He has also increased the amount of bicarbonate of soda for in surgical patients symptoms of acidosis are often observed and it seemed wise in order to neutralize this acidosis to increase the alkaline resources of the body. Glucose is diuretic energy producing nutritive and a cardiac tonic. The following are the formulas of the two solutions.

For hypodermic and intravenous injection—

Pure sodium chloride	6 50 gr
Potassium chloride	0 30 gr
Calcium chloride	1 00 gr
Sodium bicarbonate	0 50 gr
Glucose	1 50 gr
Distilled water	1000 gr

For rectal injection by the drop method—

Sodium chloride	6 50 gr
Potassium chloride	0 30 gr
Calcium chloride	1 00 gr
Bicarbonate of soda	0 50 gr
Glucose	50 00 gr
Pure ethyl alcohol	15 00 gr
Distilled water	1000 gr

The large glucose content of the last solution is noteworthy this is of advantage when absorbed though the direct injection of such large quantities of glucose into the circulation would be more dangerous than useful. In general the author believes that rectal absorption should be utilized more generally in surgery than it now is for two reasons (1) Liquids introduced per rectum undergo transformation in the portal system and are used only after they have been reduced to meet the physiological needs of the body (2) by this means the patient effects a sort of auto absorption of exactly the amount of liquid that he needs.

The ethyl alcohol mentioned in the second solution in small doses favors the penetration of liquids through the intestinal walls and increases the diffusibility of the solution. J DRAVOY

# GYNECOLOGY

## UTERUS

Smith, W S: The Early Recognition and Practical Prevention of Uterine Cancer. *Id* *Am J* 1914, lvi, 69 By Surg. Gynec. & Obst.

The author calls attention to the appalling prevalence of this scourge. A careful estimate has placed the number of deaths from cancer in the United States at 80,000 annually. He deplors the fact that in the past so little attention has been given to the early diagnosis of cancer.

Hemorrhage, leucorrhoea, or pain, especially in women between 35 and 60 years, furnish sufficient reason for a careful physical examination followed, if necessary, by a prompt resort to the microscope.

An interesting point in connection with cancerous nodules of the cervix is that the mucous membrane which overlies them is not alone congested but upon palpation it seems glued to the structures beneath and does not glide readily over them as in the normal and benign conditions. The author believes this analogous to the retraction and dimpling of the skin in cancer of the breast.

The author believes with Bossi that the proper treatment of cervical lacerations, endocervicitis, and endometritis would prevent many cases of cancer. A really humanitarian and clinically scientific work would be a propaganda for the prophylaxis of cancer of the uterus by timely systematic and persevering surgical treatment of benign affections of the cervix and uterine cavity. C. H. D. vs.

Taufer, W: Treatment of Uterine Cancer with Radium with Demonstration of Specimens. (Übe II) *g* *ersuch m t Radu m de Gebärmutterkrebs mit Demonstrationen*. *Sch. u. g. b. d. Bud. pest. k. Acad.*, 913, 11, 43. By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The author gives a list of the numerous points that are still undecided in radium treatment and concludes that in spite of the many questions and doubts in regard to it, it is still a beneficent method of treatment and experiments in its use should be extended by the state society and physicians. With previous methods of treatment only 30 per cent of the patients suffering from uterine cancer had any chance of recovery. The other 80 per cent were hopeless, but with radium astonishing effects have been produced. The hemorrhage stops in a few days, also the odor of the discharge and the terrible pains, restful sleep is reestablished as well as appetite and cheerfulness and the patient resumes hope. In the tumors treated with radium there is not only interstitial coagulation but destruction of

cancer nests, so it may be hoped that the cure will be permanent. But even if actual recovery is not obtained, radium at least frees the patient from great suffering and makes the disease more endurable. Hovavitz

Wertheim: Radium Treatment of Cancer of the Uterus. (Radiumbehandlung des Gebärmutterkrebses). *Wiener kl. W. k. sch.* 913, xxvi, 643. By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The author reports 19 cases of his own of carcinoma of the uterus, 9 of which were operable and 10 a border line case, and 9 inoperable. They were treated with large doses of radium and mesothorium with strong filtration. Among the 9 inoperable cases there were no brilliant results, complete disappearance of the tumor occurred only in cases of superficial carcinoma.

Wertheim believes he could have secured as good results from excochleation, cauterization, or vaginal amputation of the cervix. While there was not a satisfactory deep effect in the cases that were later examined microscopically, there was considerable injury observed in a number of cases consisting of general weakness, emaciation, weakness of the heart, headaches, diarrhoea, rises of temperature, conditions of excitement and sleeplessness. There were other injuries of a local nature, such as necrosis of the tissues which was not always limited to the site of the diseased focus, infiltration of the pelvic connective tissue, thickening of the peritoneum, inflammation of the lower bowel, disturbances in the function of the bladder, and more or less severe pain. He believes that these injuries can be very much reduced by means of adequate technique, especially with sufficient filtration but with large doses even strong filtration cannot entirely overcome such harmful effects, and he believes that the radical operation may be made considerably more difficult after radium and mesothorium treatment and that it will show a greater mortality.

The operation is rendered more difficult by the infiltration, the hyperemia and sclerosis of the pelvic connective tissue, while the changes in the general condition make the prognosis considerably worse.

For future work the author recommends lead filters 2-3 mm thick for the part to be irradiated, 2-3 mm thick for the surrounding region, and to 6 layers of gummed paper to guard against secondary rays. He intends to give up large doses entirely and to apply continuously not more than 3000 milligram hours, with several days intervals between.

LEMSCHKE

Schauta F Experience in the Gynecological Clinic with Radium and Mesothorium in the Treatment of Cancer (Die bisherigen Erfahrungen der 1. Frauenklinik mit Radium und mesothorium bei Krebs) Wien med Wchnsch 1913 km 1953  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The author has noted in addition to the favorable local effect on the cancer sometimes to the extent of complete disappearance severe general effects during the application also hemorrhage in two cases a vesico-vaginal fistula in one and a recto-vaginal fistula in one. Operable cases should be advised to have operation and after treatment with radium severe and inoperable cases should be given radium treatment unless they show severe degrees of cachexia or complete involvement of the vesico-vaginal and rectovaginal septa. Method of treatment three applications of 40-50 mg radium each lasting 5 days with intervals of ten days 100 mg or more should be used only in exceptional cases and then applied only for a short time. Real cures can as yet not be reported. Woss 25

Glynn E and Bell W B Rhabdomyosarcoma of the Uterus J Obst & Gynec Brd Lmp 914  
22v 1 By Surg Gynec & Obst.

The authors give a treatise on this rare neoplasm based on two recent cases with a review of 18 cases previously reported.

A pathological description reveals a very complex tumor. The transversely striated muscle cells are very few and form only a small portion of the growth. Small spindle and round cells being present sometimes forming a stroma for the larger muscle cells. Other elements are (1) multinucleated cells or sarco blasts noted in 5 cases (2) myxomatous tissue in 7 cases (3) cartilage 5 cases (4) gland tissue 6 cases. These neoplasms come under the category of mesodermal mixed tumors and probably arise from displacements of embryonic mesodermal tissue from the lumbar region during early fetal life. While the glandular elements may be derived from the Müllerian ducts it is more probable that they are persisting uterine glands and may undergo collateral hyperplasia or even carcinomatous degeneration. Carr 1 C L 2750

Kolde W Myxosarcoma of the Uterus (Über Myxosarcoma t n) 4 k f Gynäk 93 1  
181

By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The author points out the extreme rarity of myxosarcoma of the uterus if the distinction is made between true myxosarcoma and sarcoma with secondary myxomatous degeneration. Meyer holds there are only two cases in the literature. The case reported is a myxomatous fibrosarcoma of the uterus in a woman 45 years old who had been suffering from severe hemorrhage. The whole uterine cavity was filled with a soft tumor originating from the body of the uterus. Macroscopically it was seen to be made up of connective tissue and muscular

bands distended with a mucous substance microscopically the connective tissue basis of the tumor looked in some places like fibroma in others like spindle celled sarcoma. Staining with thionine decided the diagnosis the wall of the uterus was stained bright blue, narrow bright blue processes extended from it which contained areas of varying size that were colored violet which is the staining reaction of mucous. Martin

Bretschneider Myomatous Uterus Treated with Röntgen Rays (Mit Röntgenstrahlen behandelter myomatöser Uterus) Zeitschr f Gynäk 1914  
xxxviii 135

By Zentralbl f d ges Gynäk u Geburtsh a. d. Grenzgeb.

The author presented a specimen obtained on operation a myoma as large as an ostrich egg from the posterior wall of the uterus and projecting partially into the cavity of the uterus. Also several small myomata. The ovaries were also removed. They were not atrophied and on section showed numerous spots grayish yellow and varying in size from the head of a pin to that of a hemp seed. They were not sharply circumscribed. The specimen came from a patient who had had twenty roentgen ray treatments. As there had been no results the patient demanded operation.

The author leaves unsettled the question as to whether the case was a failure of roentgen treatment. From his experience he does not see why the operative treatment of myoma of the uterus should be given up. Among 104 operations for myoma he lost one patient. He opposes roentgen treatment chiefly because among 180 cases he found 3 cases of malignant degeneration of the myoma. He regards a myoma as not cured when after irradiation a large tumor still remains. Ruge

Sippel A Treatment of Myomata of the Uterus with Röntgen Rays (Die Behandlung des Uterus-myom mit Röntgenstrahlen) Münch m d  
B k k 931 36

By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The author discusses the 6 cases of myoma of the uterus that he has treated with roentgen rays in the past six and one half months following Albers-Schönberg's method with the exception that he used a shorter focal distance and a 3 mm. aluminum filter. He is not convinced of the harmlessness of Gauss' method of giving large doses. The effect of the milder irradiation is slower than that of the intense irradiation but it is effective and moreover the results of the first method have extended over a period of five years so we are in a position to form a better judgment as to its distant results.

The indications for irradiation are found in those myomata that cause severe hemorrhage by developing toward the cavity of the uterus and the mucosa. Young women need much larger doses than women nearing the climacteric. It must be borne in mind also that even when amenorrhea is attained the myoma cells are not destroyed and that

2 The necessity of testing by the Wassermann reaction all patients who present clinical pictures of chronic metritis and fibrosis since this may provide the only evidence of the syphilitic nature of the affection

3 The exact proportion which cases of syphilitic fibrosis bear to similar gross changes produced by other factors must at present remain undetermined until a longer series of cases has been investigated

CAREY COLBERTSON

Welton T Why the Uterus Should Not Be Curetted, a Substitute for Curettage, with a Report of Two Hundred and Eight Cases. *Lo J 1st ed 11 J 9 4 viii 81* By Surg. Gynec. & Obst.

Eliminating the uterine curette as a means of laboratory diagnosis and confining the question to one of therapeutics Welton questions whether or not uterine curettage is ever justifiable

All of the conditions which usually have been thought to call for uterine curettage are discussed more or less at length and many explanatory examples are given to show wherein uterine curettage is not only futile but absolutely harmful But, after all, continues the author the main objection to uterine curettage is the utter impossibility of thoroughly curetting the interior of the uterus

Welton believes that in the vast majority of cases—perhaps all cases of postperal septicemia—the curette is not only useless but criminal As a substitute for the curette he offers the application of the 50 per cent tincture of iodine to the inside of the uterus The technique of this procedure is as follows

After the cervix is dilated strips of gauze six to eight inches long which have been previously soaked in the 50 per cent tincture of iodine are introduced by means of a uterine sound into the cavity of the uterus Each strip is left in the uterus about one minute then another strip is introduced If a drain is required the last strip of iodinized gauze is left in the uterus and removed in about eight hours

In 208 cases including 34 abortions of all types 5 miscarriages and 13 post-partum septicemias the endometrium was iodinated, as above indicated and in no case was the curette used except for diagnostic purposes

The following conclusions may be formulated

1. The curette is a dangerous instrument and is not capable of doing that which it was originally intended to do.

2. Curettage in the hands of the inexperienced is a difficult and dangerous operation

3. Curettage is many times employed without reason has become a habit handed down from a past generation and could well be dispensed with altogether

4. The 50 per cent tincture of iodine (official) applied to the inside of the uterus is at the present time the best substitute for uterine curettage

HARVEY B MATTHEW

Patton W T : A Case of Supplemental Vicarious Menstruation Cured by Submucous Resection of Nasal Septum *Laryngoscope* 1914, xii 84 By Surg. Gynec. & Obst.

The author reports a case of a woman 20 years old who had hemorrhage from the nose for three days preceding each menstrual flow On examination, the nasal system was found to be deviated in an S shaped deformity touching the turbinates on both sides

A submucous resection was done and since that time no hemorrhage has occurred preceding the menstrual periods

EUGENE CARY

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This paper deals with the physiology of uterine hemorrhage The most interesting point brought out as a result of the author's experience is the effect of the cervical and uterine secretions on the menstrual blood

It was noted that the formation of a menstrual clot was usual in the lower animals and by questioning 120 women it was found that 50 per cent found small clots in their menstrual flow The question arose Why does not all the blood clot? An attempt by the author and Matland to discover an antithrombin gave only negative results

Whitehouse makes the statement that with the healthy and normal endometrium clotting always takes place in the uterine cavity This was discovered when an attempt was made to obtain blood from the uterine cavity by means of a uterine catheter The blood always clotted in the tube even when the tube was oiled and paraffined.

The question arose as to whether there was not a specific thrombolysin in the uterine secretion To prove this menstrual blood, both vaginal and uterine was obtained and added to blood from the basilar vein. This mixture clotted in a short time and on incubation the clot was resolved within from 6 to 24 hours In other experiments it was found that this thrombolytic property of menstrual blood acted quantitatively When experiments were carried out to show a fibrinolytic substance with or blood the experiments were negative

Next the effects of mucin, calcium salts lactic and butyric acids—substances present in menstrual blood—were tried on the coagulation of blood and resolution of the clot—they were negative

The author notes in passing that ovarian blood cysts have a thrombolytic action, but in no distinction to menstrual fluids they contain no calcium salts while menstrual fluids contain more than the usual amount

In brief, it is shown that the menstrual discharge must be classed under two heads viz (1) contents of the uterus, and (2) contents of the vagina The menstrual blood clots very rapidly; the uterus and is then digested by a lysin and passes into the vagina usually in a fluid state

**Weishaupt E:** Eosinophilic Leucocytes in Inflammatory Infiltration Especially in Carcinoma of the Uterus Treated with and without Irradiation (Über eosinophile Leukocyten in entzündlichen Infiltraten besonders der mit und ohne Strahlentherapie operierten Uteruscarcinome) *Arch f Gynäk u Geburtsh d Grenzgeb* 1913 11 489  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The examination for local increase of eosinophilic leucocytes showed positive results in 59.3 per cent of the cases, most of them carcinoma of the female genitalia. In other tumors and in inflamed tissues there was a local increase of eosinophiles in only 20 per cent of the cases.

In an alveolar carcinoma of the cervix that had been treated with small doses of roentgen rays there was a maximum increase in eosinophilic leucocytes but with only a few badly preserved plasma-cells. Eosinophilic leucocytes and plasma cells as well occur in great numbers only in somewhat succulent living tissue; they disappear from necrotic and sclerotic hyaline tissue regardless of whether this condition has arisen spontaneously or as the result of irradiation.

Local eosinophilia is found in beginning as well as advanced carcinoma and in those that show necrosis and hemorrhage as well as those that do not. Local eosinophilia is less uniform and less pronounced than plasma cell infiltration in carcinoma; it is independent of infiltration with neutrophilic leucocytes. In areas with local eosinophilia there is always an increased number of eosinophilic leucocytes in the blood vessels of the region.

**Poth, H:** Torsion of the Myomatous Uterus (Kasustischer Bericht über Achsendrehung des myomtösen Uterus) *Zentr f Gynäk* 1913 11 93  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

A fifty six year old unmarried woman had passed the menopause five years before. At 35 years of age her abdomen had begun to increase in size. Four weeks before the present illness there had been increased growth of the abdomen, pain and constipation. Two days before the operation she was troubled with sudden severe pain, vomiting and complete constipation. Laparotomy was performed because torsion of the pedicle of a tumor of the right ovary was suspected. There was a hemorrhagic exudate in the abdominal cavity. A tumor as large as a man's head was found attached by a short pedicle to the anterior surface of the soft fundus. It was removed after the pedicle was ligated. The uterus with the adnexa and the right broad ligament was twisted 360° around its long axis from right to left. It was amputated with the adnexa at the point of torsion. The myoma weighed 3750 gms. On the anterior surface of the fundus there was a subserous myoma as large as a walnut and on the posterior surface an interstitial one the size of a dove's egg. The torsion was probably started by the patient's work as a seam-

stress and the immediate cause was probably active peristalsis and change of position in sleep. Eighty two cases of torsion of a myomatous uterus are described in the literature. **MORALLER**

**Peterson E. A:** Streptococcal Infection of the Cervix Uteri. *Med Rec* 1914 LXXV 571  
By Surg. Gynec. & Obst.

Examination of a young girl of 18 years showed the vulva to be the seat of an intense erysipeloid inflammation involving the entire genitals and the surrounding skin for a distance of one inch. This was accompanied by much itching and burning. Leucorrhoea was also present. Three such attacks occurred and the leucorrhoea at no time ceased between attacks although antiseptic douches were used.

After the third attack a vaginal examination was made and the portio vaginalis of the cervix was found to be red and denuded of mucous membrane. After a treatment of daily applications of argyrol tampons for a month the condition was cured. Bacteriological examination showed the presence of many short chained streptococci. There was no recurrence of the former condition and the leucorrhoea ceased. **ELGERT CARY**

**Whitehouse B:** Syphilis in Relation to Uterine Disease. *J Obst & Gynec Brit Emp* 1914 XXV 3  
By Surg. Gynec. & Obst.

This paper is a preliminary report on a series of 18 cases of chronic metritis of which a history of syphilis was obtained in but one but of which 7 gave a well marked positive reaction to the Wassermann test. The author had usually regarded fibrosis uteri as being a reparative process secondary to degeneration of the myomatous elements. Especially in elderly women this was thought to be the result of arteriosclerosis but in the light of the positive Wassermann reaction it would appear that this fibrosis is also at times associated with a syphilitic element. This agrees with Andrews' observation that certain lesions of advanced syphilis are intrinsically fibrotic from the beginning as the hepatic cirrhosis and pulmonary induration in the syphilitic infant. Many lesions in the acquired disease take the same form.

The writer's investigations were made along two lines of inquiry: (1) the application of the Wassermann reaction to patients who present uterine lesions and (2) attempts to demonstrate the spirochete pallida in the tissues or secretions of the uterus. Thus far Whitehouse has failed to show the organism in sections stained by Giemsa's method. It should be noted that of the 7 cases reported as yielding a singly positive Wassermann reaction all were multiparae. The conclusions thus tentatively formulated are as follows:

1. The importance of recognizing a form of fibrosis of the uterus produced by the virus of syphilis in other words the existence of a true syphilitic fibrosis.



2 The necessity of testing by the Wassermann reaction all patients who present clinical pictures of chronic metritis and fibrosis since this may provide the only evidence of the syphilitic nature of the affection

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CAREY CULBERTSON

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Welton believes that in the vast majority of cases—perhaps all cases of puerperal septicemia—the curette is not only useless but criminal. As a substitute for the curette he offers the application of the 50 per cent tincture of iodine to the inside of the uterus. The technique of this procedure is as follows

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The author notes in passing that ovarian blood-cysts have a thrombolytic action, but in contrast to menstrual fluids they contain no calcium salts while menstrual fluids contain more than the usual amount.

In brief it is shown that the menstrual discharge must be classed under two heads: viz (1) contents of the uterus, and (2) contents of the vagina. The menstrual blood clots very rapidly in the uterus and is then digested by a lyase and passes into the vagina usually in a fluid state.

The author discusses the histological characteristcs of the menstruating endometrium as described by Alder and Hutschman. The condition is divided into (1) premenstrual (2) menstrual and (3) post menstrual stages. The premenstrual period is the time when the cells of the endometrium have reached their highest stage of physiological development and at this time they exhibit in many cases a decidual appearance or a decidual reaction as shown in figures in the original article.

If pregnancy does not now take place menstrual hæmorrhage occurs and tissue cells are lost. The post menstrual period is a reconstructive period.

As regards factors in the production and cessation of menstrual hæmorrhage there are three possibilities: (1) the effect of uterine contractions limiting the supply of blood (2) the action of hormones producing capillary dilatation *in utero* and (3) a biochemical function of the endometrium. Bell and the author have both caused uterine contractions in rabbits by injection of uterine secretions so in this way by reabsorption uterine blood flow may be limited. Bond has gone into this chemical composition of uterine secretions and has artificially produced hydrometria for experimental purposes in rabbits. Whitehouse performed six experiments on rabbits with this in mind and reached the following conclusions:

The experiments as far as the investigation has gone appear to show that the uterine secretion in rabbits at least is under the control of the ovaries both as to amount and physiological action. The normal secretion apparently aids coagulation of the blood—a point of interest when it is remembered that pro-œstrum in this animal is not associated as a rule with external hæmorrhage. The secretion also appears to stimulate œstrum. Bond's experiments have shown that when the fluid is pent up as in artificial hydrometria œstrum is frequent and prolonged and the author's investigations certainly tend to confirm Bond's observations. It appears possible therefore that uterine secretion stimulated and controlled by an ovarian hormone is partly absorbed and produces that dilatation of vessels which is characteristic of the late stages of pro-œstrum and immediately precedes œstrum.

The effects of extracts of sheep's endometrium and ovary containing corpus luteum on the uterus and ovaries of rabbits was tried but only negative results were obtained. LUGGE C. W.

Folland R. Dermatoses Dysmenorrhœica Symmetrica (W. ter. Beilage r. D. m. tous d. m. rth. ic. mm. tr.) A. h. f. Derm. 1. 5. ph. 91.

B. Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

This disease affects only women who have more or less menstrual disturbance. Most cases show the lipoid reaction of Neumann and Hermann. The skin affection begins with hyperæmia of the perfollicular vessels followed by serous or bloody exudation and the formation of vesicles on the epidermis.

In mild cases the process ends in a few days in severe cases there may be necrosis in the nature of an infarct which extends entirely through the cutis and heals slowly leaving severe scars. The eruption may appear over the whole body but it is almost always symmetrical. The disease often appears as a symptom of puberty. Therapeutically ovaraden trierinn seems to have a good effect. The author thinks it certain that the skin symptoms are not artefacts. The etiology seems to indicate a disturbance of the internal secretion of the ovary but nothing is known as to the nature of it.

The author rejects the theory that it is a tropho neurotic disturbance. To prove that dermatosis dysmenorrhœica symmetrica is an independent clinical entity he discusses the so-called angioneuroses, which have the characteristics of herpes and can be traced to lesions of definite nerves. RUBEKOV.

Friedrich M. Amenorrhœa and Tuberculosis a Clinical and Experimental Study (Amenorrhœe und Phthise. Eine klinische und experimentelle Studie) Arch. f. Gynäk. 1913, 11, 376.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The results of the author's experiments are as follows. Amenorrhœa very frequently accompanies pulmonary tuberculosis therefore it has been very commonly assumed that there was a causal relation between them. Lipoid determination does not show any such relationship. It is probable that the ovaries are very sensitive organs and the cessation of their function shows a decreased resistance of the body or a disturbance in the equilibrium of metabolism. Animal experiments did not show that lipoidæmia favored the dissemination of the tubercular process in fact they indicated the contrary. Tuberculosis made marked progress only in pregnancy which shows that special factors are at work in this condition. In intoxications there was no effect on the process either for good or evil. But lipoidæmia is an important factor in pregnancy. It is possible that in this condition lipoid determination may be a valuable means of diagnosis.

RUBER.

Van Teutem E. S. Does Retroflexion Cause Symptoms (Macht Retroflexion Symptome)? Maandbl. ver. k. en vrowenarts 913, 11, 61.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The answer to the above question seems to the author important from a medicolegal standpoint. He examined 441 parous and 212 nulliparous women at the Leiden gynecological clinic and concluded that retroflexion without symptoms is very unusual. Sixty four per cent of the parous and 75 per cent of the nulliparous women complained of pain pain in the abdomen and in some cases sciatica etc. were to be attributed to the retroflexion. 79 per cent of the multiparæ and 69 per cent of the nulliparæ had menorrhagia. 37 and 73 per cent dysmenorrhœa. 50 and 53 per cent too frequent menses. 56 and 54 per cent irregular menstruation and 1 per cent of the nulliparæ amenorrhœa.

There was leucorrhoea in 77 per cent of the multiparae and 62 per cent of the nulliparae while the same symptom occurred in antelexion in only 45 and 20 per cent of the cases. Sterility was not increased by retroflexion but the tendency to abortion was. About 20 per cent of the women complained of general disturbances such as nervousness and stomach disorders.

Asthenic symptoms were found twice as often in women with retroflexed uterus as in women with uterus in a normal position. In almost all of the cases the author believes the symptoms were to be attributed to the retroflexion. Asthenia is rarely diseases of the adnexa and prolapse practically never the cause as the tables relate only to movable retroflexions doubtful cases were eliminated. C. H. STRATZ.

Stark, S. The Etiology of Pelvic Prolapse, Anatomically Considered. *Lancet-Cl.* 9 4 1911, 369.  
By Surg. Gynec. & Obst.

The views presented are the result of dissecting seven pelves from subjects who had met with laceration of the outlet and presented varying degrees of prolapse.

Differences in character and degree of descent of pelvic structures are dependent upon variations in the nature of existing lesions. Although the paper only takes cognizance of prolapse due to anatomical trauma with the sequelae thereof the author states that the same underlying principles can be made to apply to congenital prolapse to that associated with spina bifida extrophy of the bladder and that consequent upon senility. It is his belief that prolapse is at all times the direct result of a fault in the connective-tissue structures of the genito-urinary organs. He has no faith in the influence that the levator ani or any other perineal muscle directly exercises as supporting agent and believes that this power is only operative through the medium of its fascia. It is high time he thinks, that reference to tears through the levator ani muscle and textbook illustrations of this character were eliminated for they are pure figments of the imagination. In all the minute dissection made by Tandler and Halban, Edward Martin and Liepmann not once did they encounter a tear through the levator muscle.

The author then takes up the normal position of the genito-urinary organs. This is followed by a description of the anatomy of the pelvis and the rôle played by the various fascial layers. From his studies Stark holds that the descent of the uterus or bladder wall is entirely due to damage to the pelvic connective tissue and prolapse of the vaginal septum to a lesion of the connective tissue of the pelvic outlet. It is an accepted observation that complete laceration of the perineum is very often unattended with descent of the pelvic viscera. The enlargement of the genital hiatus is the direct result of a defect in the perineal fascia which permits the levatores to roll outward and consequently toward the lateral wall of the pelvis. The atrophy

and fatty degeneration are secondary conditions following the pressure and circulatory disturbance occasioned by the prolapse. EDW. L. COHEN.

Schubert G: Transplantation of Fascia in the Treatment of Total Prolapse (Die Erwerbung der freien Fascien-transplantation zur Heilung des T. talprolapses). *Zentralbl. f. Gynäk.* 9 4 1911, 21.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author describes in detail a procedure by which he tries to supplement the defective function of the ligaments of the uterus by means of transplanted fascia. By fixing a band of fascia in the region of the sacro-uterine ligament the prolapsed part of the lower segment of the uterus is lifted up and held in a position of antelexion by a sort of lever action the fulcrum of the lever being about at the level of the insertion of the round ligament in the normal uterus. By fixing the free end of the band of fascia to the abdominal musculature the fulcrum is kept from sinking further. BRUNO WOLFF.

Watkins T. J. Transposition of the Uterus and Bladder in the Treatment of Extensive Cystocele and Uterine Prolapse. *J. Mich. St. M. Soc.* 9 4 1911, 27.

Cystocele is hernia of the bladder—uterine prolapse is hernia of the uterus. The transposing of the relative positions of the bladder and uterus cures the cystocele. The bladder rests upon the posterior surface of the uterus. The uterus plugs the hernial opening. There has been no recurrence to the author's knowledge of the cystocele in an experience of sixteen years. Some recurrence of the uterine prolapse has occurred in 5 to 10 per cent of cases.

The fundus the cervix or the fundus and cervix may protrude into the vaginal orifice. This however is easily remedied by a second operation.

The operation should be modified as required in each individual case as follows: (1) Very large uterus (2) hypertrophied or much elongated cervix and (3) extensively elongated broad ligaments.

The modified technique consists in: (1) Excision of part of the large uterus the anterior wall and part of the fundus (2) high amputation of the cervix (3) when much of the uterus is removed or a high amputation made excision of all of the uterine mucosa simplifies the technique.

Thorough reaming out of the cervix is valuable in cases of complete uterine prolapse. Firm closure of the perineum is essential to a good result.

Stickel, M. Experimental Study of the Effect of Glands of Internal Secretion on the Activity of the Uterus (Experimentelle Untersuchungen über den Einfluss der Drüsen in innerer Sekretion auf die Uterustätigkeit). *Arch. f. Anat. Physiol.* 9 3 1911, 59.

By Zeitschr. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

Spontaneous contractions of the uterus are only rarely found in virgin rabbits. In rabbits which have

delivered young there are almost always spontaneous contractions, while in rabbits which have been castrated the curve resembles that of virgin rabbits. The uterine curve of rabbits whose ovaries have been treated with roentgen rays is similar. The virgin uterus responds the least; the pregnant uterus the most to oxytocics.

The substances that stimulate the uterus to contractions in rabbits that have been delivered of young are ovarian extract, a corpus luteum extract of cattle and ovarian extract of normal rabbits and those that have been treated with roentgen rays. Corpus luteum extract has the most pronounced effect but the effect is less marked in castrated animals.

Extract of ovaries of rabbits that have been treated with roentgen rays has an especially active effect on the uterus of rabbits that have been treated with the rays. He comes to the conclusion that there is in the body of the rabbit a hormone that inhibits uterine contraction and that there is an ovarian hormone that is antagonistic to it. **LAURE**

**Schmauch G.** The Thyroid Gland in Woman and Its Effect on Menstruation and Pregnancy (Die Schilddrüse der Frau und ihr Einfluss auf Menstruation und Schwangerschaft). *M. Misch's Ges. r. d. Gynäk.* 913 xxviii, 66.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The difference between man and woman is due not only to the ovary but to the whole system of glands with internal secretion. The periodicity and greater irritability of the organs is specifically feminine. Periodicity is manifested by menstruation which does not depend on ovulation alone but must be regarded as a product of polyglandular activity. The participation of the thyroid is shown by its increase in size during the period.

A further evidence is furnished by the history of a case of amenorrhoea with menstrual melenes in which thyriden had a temporary curative effect.

The periods often occur prematurely during thyrid therapy, a case being reported by the author in which migraine appearing first at the time of the periods and then more frequently was cured by thyriden.

In another woman with symptoms of Basedow's disease there was a decrease in the menstrual discharge in a later stage of hypothyroidism; it was increased and still later under thyroid medication it returned to the earlier type.

In the beginning of pregnancy there is frequently insufficiency of the thyroid gland. A normal course is possible only if the gland is sufficiently active. All changes in metabolism such as the removal of calcium phosphorus etc. for the nutrition of the foetus irritate the glands with internal secretion, evidence of which is found in the insufficiency of the adrenals manifested by pigmentation and in hypertrophy of the hypophysis and thyroid. A case of threatened eclampsia was favorably influenced by thyroid medication.

The hypersecretion of the thyroid enables the mother to give up more salts for the nutrition of the foetus. If this were not the case the maternal organism would be exhausted by the foetus; therefore women who have lost the necessary elasticity of the organs suffer much from pregnancy. After delivery the functional capacity of the glands is decreased again without any disturbance; this decrease is as inexplicable as the earlier increase. Ovulation may furnish the stimulation for the formation of myomata; pregnancy interrupts this periodical stimulation and may therefore tend to prevent them. In one case a myoma was found during pregnancy that could not be demonstrated two and one-half years later. Sterility frequently produces numerous unpleasant symptoms that disappear with the beginning of pregnancy. **KREMAUER.**

#### ADNEXAL AND PERIUTERINE CONDITIONS

**Meyer R.** Pathological Anatomy of the Ovary (Beitrag zur pathologischen Anatomie des Ovariums). *V. handl. d. deutsch. path. Ges. Basel* 1913, 396.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The chief sources of ovarian cysts are (1) Cysts which originate in perioophoritis by heterotopic proliferation of epithelium and the formation of an epithelial lining to abscess cavities; (2) cysts of the rete and of the medulla; and (3) parenchymatous cysts, in which follicular cysts and corpus luteum cysts may be distinguished. Meyer draws a sharp distinction between these two forms contrary to most authors. A further peculiar form is cystic atresic follicles with partial accessory lutein border formation and the partial persistence of granulosa epithelium in completely atresic follicles with lutein formation. **GOLDSCHMIDT.**

**Kell R. R.** Functional Test of Activity of the Ovary (Über Funktionsprüfungen der Ovarialtätigkeit). *M. Misch's Ges. r. d. Gynäk.* 1913, 1, 3, 63.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author reviews the experiments of Cristofolini and Adler as to the inhibitory effect of the ovary on the chromaffin system. The subjects were 4 patients with amenorrhoea, 3 in the menopause and 13 castrated women. There was a strongly positive reaction only 5 times after an 0.3 mg adrenalin solution was used; in 2 cases of marked symptoms of the climacteric there was no reaction and on the other hand it was positive in 5 cases of severe menstrual hemorrhage. The reaction to 0.0005 gr atropine and 0.005 gr pilocarpine was positive only 5 times out of 13 cases of severe menstrual bleeding, in one of which the adrenalin reaction was also positive in 9 normal control cases it was positive 3 times.

The conclusion is that the function of the ovary cannot be tested by the reaction after injections of adrenalin or of atropine and pilocarpine.

**BUTTERWORTH.**

Perkins, C. W. Cancer of the Ovary with Rupture in a Child of Eight Years. *J Am Inst Homoeop* 1914, vi 790. By Surg. Gynec. & Obst.

Perkins gives a short résumé of the literature and reports a case of sarcoma of the ovary in a girl of eight years.

At the Massachusetts General Hospital, between 1870 and 1910 there were only 54 cases of cancer of the ovary in 6 of these there was no operation in 19 there were at autopsy evidences of ascites 5 cases were sarcoma but one of these had ascites. No ages were given. Labey reported a case of carcinoma of the ovary in a girl eleven years old. According to Flannesteel the average age in his series was thirty-two years.

It is said that sarcoma of the ovary is almost always primary and that if secondary it is from the uterus. In Perkins case the uterus was normal but the omentum was sarcomatous so that the growth must have been secondary to the omentum.

The following conclusions are appended:

1. The accurate diagnosis of malignant tumors in young girls is rarely possible.

2. Fluid in the abdomen in a child without general anasarca, provided pericarditis and cirrhosis be excluded, should always be investigated by exploratory laparotomy.

3. Ovarian tumors in young girls should be removed immediately.

4. The occurrence of metastatic nodules in surrounding structures is almost certain.

HARVEY B. MATTHEWS

Klein, G.: A Hitherto Unrecognized Function of Malignant Ovarian Tumors (Über eine bisher nicht bekannte Funktion maligner Ovarialtumoren). *Ztschr f Geb. u. Gyn.* 1913, 93, 3. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

On the microscopical examination of two malignant papillomata of the ovary the author found immediately under the surface epithelium of the villi, and only there, that the connective tissue was saturated with serous fluid. This was due to absorption on the part of the tumor epithelium, which had taken up fluid from the lymph-spaces of the abdominal cavity. This fluid may possibly have a toxic effect on tumors. If this is true, the appearance of ascites in malignant tumors is to be regarded as a protective procedure on the part of the body designed to destroy the tumor. Therefore the subcutaneous injection of ascitic fluid may be regarded as a rational therapeutic measure.

RITTERSHAUS

Lewitzky, M. D. Primary Carcinoma of the Tube (Zur Frage des primären Tubercarcinoms). *Ztschr f. Geb. u. Gyn.* 1913, 93, 3. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A short description is given of the published cases of primary carcinoma of the tube. From these and his own cases the author describes the clinical and pathological anatomical picture of the disease.

Preceding inflammation of the tube is an etiological factor. Most cases are in women who have had no children or only one. It generally appears during the climacteric. Cramplike pains are among the early symptoms. There is leucorrhoea which is first serous, then seropurulent and finally bloody. It is periodical and when it appears the tube decreases in size. Frequently there is dysuria, but often there is no decided cachexia. The symptoms mentioned, except the cramplike pains are inconstant therefore there are difficulties in the clinical diagnosis.

Primary carcinomata of the tube are of papillary structure from the size of a plum to that of a child's head and hard in consistency. They are mostly situated in the true pelvis to one side and behind the uterus. Microscopically they may be papillary or villous alveolar or mixed generally the latter. As to the structure of the epithelium they are cylindrical celled cancers. Unfavorable conditions of nutrition lead to degenerative processes and deposition of calcium. Extension of such cancers is by continuity and metastasis. The treatment consists of operation by laparotomy. There are different methods of operation: the radical, the supravaginal, removal of both tubes, or removal of only the diseased tube. Recurrence is frequent and generally appears between the nineteenth and twentieth month. As many cases show the result depends not on the method of operation but on the operation being performed early.

GRASER.

Fonyó, J.: Primary Carcinoma of the Tube (Über das primäre Tubercarcinom). *Zentralbl. f. Gyn.* 1913, 93, 3. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Cancer of the tube has only been diagnosed in 65 per cent of the cases. Fonyó distinguishes cancer of the mucous membrane (a) simple papillary carcinoma (b) alveolar papillary carcinoma and cancer of the wall of the tube alveolar carcinoma (Friedenheim). He regards the papillary type as the chief one, the others being merely variations of it. None of the methods of treatment have been successful because the diagnosis is generally not made until the disease is in an advanced stage. As only the early stages give any hope of cure by radical operation and as diagnosis at this stage is very difficult, Fonyó recommends that radical total extirpation with removal of the retroperitoneal glands be performed in all cases of doubtful tumors of the adnexa.

K. HOFFMAN.

Kraus, E. Epithelial Proliferation in the Tube Resembling Carcinoma (Über carcinomähnliche Epithelwucherungen in der Tube). *Gyn.* 1913, 93, 3. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author examined 60 inflamed tubes histologically. Thirty-eight showed no proliferation of the epithelium and 22 showed proliferation. Three of these resembled carcinoma: the epithelium had penetrated the entire stroma. This similarity to carcinoma has

been described by most authors in connection with tuberculosis but Von Franqué had a case in a non tubercular salpingitis the author found that it was not tuberculosis but inflammation that was responsible for the proliferation. Among the 60 cases there were only 4 cases of tuberculosis and none of these showed any similarity to cancer.

The author explains the extreme degree of proliferation as follows. The products of inflammation stimulate the epithelium to proliferation in places where the secretion stagnates the irritation acts over a longer time and the proliferation continually progresses. The question of the etiological relation between cancer and inflammation cannot be decided for it is generally very difficult to decide whether the inflammation or the cancer came first. He does not decide the question of whether the epithelial proliferation is really carcinomatous.

ROSENDAHL

Child Jr C. G. The Surgical Treatment of the Tube and Ovary. *J Obst & Gynec Brit Emp* 1913 xxiv 278. By S. R. Gynec. & Obst.

Child contributes a general article on the technical phase of his subject. His conclusions are:

1. When operating by the abdominal route the pus should always be removed by aspiration before any extensive separation of adhesions is attempted. This prevents soiling the peritoneal cavity and by decreasing the bulk of the tumor eases up on the adhesions, adding very materially to the subsequent ease of the operation.

2. Drainage should not be used in other than exceptional cases such as the mixed infections and where there is a great deal of oozing from raw surfaces and then the drainage should be per vagina.

3. The transverse incision should be used for greater exposure of the field of operation with less exposure of the intestines.

4. In closing the abdominal wound the use of absorbable suture material should be avoided. Better results are to be obtained with non absorbable non infectible material.

5. The condition of the appendix should be inspected without fail to make sure that it is not in the pelvis.

CAREY COLBERTSON

#### EXTERNAL GENITALIA

Ruge E. Construction of Vagina from Sigmoid Flexure by Laparotomy (Ersatz der Vagina durch die Flexur M. telis Laparotomie). *Deut che med Wchnsch* 914 xl 0.

By Zentralbl f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

The author gives a short critical discussion of the two chief methods of replacing the defective vagina then he describes a procedure successfully performed on one of his patients. He made a transverse incision of the fascia just above the symphysis. The free loop of the flexure was brought forward and a piece 15 cm long excluded with the mesentery attached. It was ligated above and below with linen

ligatures. The excised piece was laid aside in damp compresses while the two openings in the flexure were sutured together circularly with a continuous linen and an invaginating catgut suture. The incision in the mesentery was then closed with fine sutures. A canal was made with dressing forceps from the vulva through the floor of the pelvis and the ligature at the lower end of the excised piece of intestine seized and drawn through it until it projected 1 cm in front of the vulva. The peritoneum of the pelvic floor was sutured to the piece of intestine with two catgut sutures. The mesentery of the flexure was fastened to the pedicle of the vessel by a catgut suture so that it was separated by the rest of the flexure from the remaining contents of the abdomen. The abdominal wound was sutured, the ligature was removed from the end of intestine in front of the vulva and the intestinal mucous membrane sutured with catgut to the skin of the vulva.

MORRIS

Curtis A. H.: The Etiology and Bacteriology of Leucorrhœa. *Su. g. G. & Ob.* 914 xxiv 299.

By Surg. Gynec. & Obst.

The author's paper is the forerunner of one on treatment. A twenty months study of 75 cases furnishes the basis for the report which includes a detailed description of bacteria common to leucorrhœa.

The author finds that the uterine cavity tends to remain free from bacteria in cases of chronic purulent vaginal discharge.

Mucus from the cervix may promote the development of purulent discharges the usual seat of formation of which is the lower genital tract.

Gonorrhœal infection is the exciting cause of leucorrhœa in the majority of women who have never been pregnant. After causing changes favorable for the development of mildly pathogenic organisms the gonococcus tends to disappear. This suggests that a chief part played by it in chronic cases consists in preparing the soil for leucorrhœa-producing anaerobic bacteria.

Relatively small numbers of staphylococci and colon bacilli are found except in patients who frequently use douches. Streptococci are wanting in fresh smears but develop from diplococci in cultures.

The great contingent of leucorrhœal bacteria consists of anaerobes of which gram negative bacilli form a large proportion. These bacteria attack the tissues with low resistance and apparently play an active part in the production and maintenance of leucorrhœa. Consideration of the influence on leucorrhœa exerted by various lesions e.g. lacerations displacements etc. is reserved for a later date.

Varela, C. Treatment of Simple Vaginal Hydrocele by Adrenalin (Traitement de l'hydrocèle vaginale simple par l'adrénaline). *Empereur med* 913 xii, 335.

By Journal de Chirurgie

Varela reviews the difficulties in the treatment of vaginal hydrocele. In puncture followed by the

injection of tincture of iodine there is pain which keeps the patient in bed for several days frequent recurrence etc the tunica vaginalis is often so thick that it is difficult to turn it back and if it is excised there is an injurious effect on the function of the testicle Therefore he has adopted Rupff's treatment puncture followed by the injection of adrenalin which is a simple method, harmless painless and effective and it can be performed in the office without keeping the patient from his work.

Rupff first treated vaginal hydrocele by this method the idea resulting from the reading of Barr's treatment in 1904 of several cases of serous effusion pleural pericardiac and ascitic by the injection of 1 5000 adrenalin the injection being repeated two or three times the result being that effusions which could not be overcome in any other way disappeared Rupff decided to apply the method in the treatment of two cases of vaginal hydrocele one of which had lasted for 10 years and the other for 7 years Both cases had been treated unsuccessfully by repeated puncture with or without injection of alcohol iodine etc Rupff removed several hundred ccm of the liquid and injected 2 ccm of 1 5000 adrenalin The results were the same in the two cases a little after the injection there was severe pain then for a few days slight symptoms of inflammatory or irritative reaction with a little effusion which disappeared after a few days with drying up of the hydrocele in a few weeks There was no recurrence 9 months after the operation.

Rupff found the method simple harmless and efficacious and decided to use it commonly in his practice Dzewoncki also used the method as a result of reading Barr's article In two cases he withdrew 4 to 5 ccm of hydrocele fluid and injected half a ccm of 1 1000 adrenalin There was little or no reaction and also little effect Five days later in one case and 8 days later in the other he repeated the injection the result being moderate reaction with redness and swelling but little pain Two weeks after the first injection both patients were discharged cured Fifteen months later one of them was seen again without recurrence.

Barr's method deserves to be tried in cases where for any reason radical treatment by partial resection of the tunica vaginalis cannot be performed The latter operation remains the method of choice The chief point urged against it injury to the function of the testicle does not occur if the resection is only partial, as Ancel and Bouh have shown It is only Bergmann's total resection that produces atrophy of the spermatic part of the gland with preservation of the interstitial part P. DE RUO B. CA.

Benda, C. Case of External Female Pseudohermaphroditism (Fall von Pseudohermaphroditismus femininus sternus) Berl. kl. Wochenschr. 1904, 4, 66.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Autopsy was performed on the body of a two-months' old boy Externally there were completely

developed male genitalia, except that there were no testicles in the scrotum, in conjunction with a female vagina uterus tubes and ovaries. This is the most complete case of pseudohermaphroditism that has thus far been observed and Benda proposes the name pseudarrhenia for it In the hope of discovering true hermaphroditism he examined the ovaries for male gland formation but found none.

Great importance is sometimes attached to Leydig's interstitial cells in the way of internal secretion but the author does not believe this is justified because the cells of all the other glands with internal secretion are epithelial in nature while these are connective tissue they are also found in very varying amounts in the functioning testicles of very nearly related animals There is a certain influence of the adrenal cortex on the sexual characteristics of both sexes In this case there was tremendous hyperplasia of the suprarenals especially a true glandular proliferation of the parenchyma of the cortex Fiebiger reports that in all the more extreme degrees of pseudarrhenia there is a proliferation of the cortical substance and Kraus reports suprarenal tumors accompanied by development of virile hair Eschwege.

#### MISCELLANEOUS

Busse Gynecological Examinations and Operations in Psychoses (Gynäkologische Untersuchungen und Operationen bei Psychosen) M. Arch. med. Wochenschr. 1913, 1, 863.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The author was astonished to find how frequently gynecological diseases were found in mentally diseased women Abnormalities in position were usually most frequent as a result of injuries during delivery Inflammations of the internal and external genitalia of the adnexa the parametrium and vagina were frequent also myomata and other tumors Sometimes the internal genitalia were completely lacking A very interesting discovery was the relative frequency of abnormalities of development of the uterus and various hypoplasia aplasia and infantilism.

Most of the operations were for the correction of displacements In a considerable number of these cases the ovaries were removed also and later the effect in the psychosis was tested by means of Abderhalden's reaction Some of the operations were for myomata the usual technique being employed but the results of laparotomies with the transverse incision seemed to be better than with any other incision RUCK.

Friedel Gynecological Examination and Operations in Psychoses (Gynäkologische Untersuchungen und Operationen bei Psychosen) M. Arch. med. Wochenschr. 1913, 1, 2863.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The author and Busse examined 200 cases in 10 per cent of which gynecological operations were performed Two hysterical patients who had been

castrated one 30 and one 2 years before showed no effect on their psychoses. The imbeciles were often kept in the institution only on account of the fear of their having illegitimate children.

In epileptics improvement was seen after abortion. In the cases of circular insanity different gynecological affections were demonstrated but in spite of them the patients had recovered from previous attacks of insanity.

In dementia praecox castration was performed in the two following groups: (1) Where the attacks were repeated after several deliveries with progressive mental failure. (2) In patients with periodic conditions of excitement with the hope of influencing this condition. It is too early to pass judgment on the operations. REVUE

Waldstein E. and Ekler R. The Demonstration of Absorbed Spermatozoa in the Female Body (Die Nachweis von hien Spermas im ibl hen Organismus) *Wse kl W A A 19 3 2 1* 1883

By Zentralbl f d ges Gynak u Geburtsh d Cren geb

The authors tried to answer the question of what becomes of the spermatozoa in the female body after cohabitation by means of the Abderhalden reaction. They used rabbits as experimental animals and found that ordinarily there is no ferment in rabbits blood that breaks up testicular substance. But after cohabitation in 15 animals the blood showed the property of decomposing testicular substance. Moreover the same animals reacted positively that had before reacted negatively. This shows that as a result of cohabitation a ferment is developed in the female body that reacts specifically to testicular substance. The same reaction was found in 9 out of 10 cases during pregnancy but the reaction was not so strong as after coitus. The conclusion naturally would be that the reaction was brought about in some other way during pregnancy probably through the intermediation of the fetus.

FRANKENSTEIN

Von Franqué O. Pathology and Treatment of Genital Tuberculosis in Women (Pathologie und Therapie der Genitaltuberkulose d. Weibes) *Wse kl W A A 19 3 2 1* 1883

By Zentralbl f d ges Gynak u Geburtsh d Grenzgeb

Von Franqué discusses the etiology of genital tuberculosis in women and asserts that it generally begins in the tubes, while the ovaries are extraordinarily resistant to tuberculosis. Primary sterility and dysmenorrhoea are often results of genital tuberculosis and a yet graver condition; the tendency to carcinoma produced by tuberculosis. He then considers tuberculosis of the individual genital organs. The treatment should be operative either excision of the tubes or radical peritonitis.

The question is discussed of the effect on each other of pregnancy and tuberculosis. Tuberculosis of the placenta is much more frequent than was formerly supposed but communication of tuberculosis to the child either within the uterus or at delivery is very rare and the fact of a congenital predisposition is not satisfactorily established so that it is not justifiable to interrupt pregnancy for the sake of the fetus but it is undoubtedly justifiable to sacrifice the pregnancy to save the mother. Abortion should be considered only when it can reasonably be expected that it will improve the mother's condition. If the tuberculosis is so far advanced that it seems nothing will stop it then the child's welfare must be considered. The earlier the pregnancy is terminated the more favorable the influence on the tuberculosis. Care must also be taken that the woman does not become pregnant again so operative sterilization should be performed or vaginal amputation of the body of the uterus with a view of excluding the dangerous placental site as suggested by Von Bardeleben.

J. KLEN

Hoehe O and B hne K. Length of Life of Homologous and Heterologous Spermatozoa in the Female Genital Tract and in the Abdominal Cavity (Über die Lebensdauer von homologen und heterologen Spermatozoen im weiblichen Genitaltrakt und in der Bauchhöhle) *Z f Bl f Gynak 19 4 21* 1883

By Zentralbl f d ges Gynak u Geburtsh d Grenzgeb

The less acid in the vaginal secretion the longer the spermatozoa retain their motility in the vagina. In the markedly acid secretion of pregnant animals they lose their motility very quickly so that after an hour no living ones can be found. Human spermatozoa were found to be destroyed very quickly in the supravaginal segment of the genital tract of rabbits and guinea pigs some individual specimens lived as long as 4 days. Even the spermatozoa of the same species mostly died after 2 days and after 6 days no more could be found at all.

The authors conclude that after the third day it is exceptional for active spermatozoa to be found in the uterus. There is no ground for assuming that spermatozoa capable of impregnation can be found for several days in the healthy tube of the sexually mature female. The spermatozoa probably remain capable of functioning only a short time in the tube at the very most not more than three days. The spermatozoa that penetrate the peritoneum generally succumb to phagocytosis and are usually destroyed within from 4 to 20 hours. The length of life of the spermatozoa depends on the activity of the walls of the genital tract. The healthier the female and the more active the genital mucous membrane the quicker the spermatozoa are destroyed.

HOLSTE



# OBSTETRICS

## PREGNANCY AND ITS COMPLICATIONS

McGuire S. Evolution of Treatment of Ectopic Pregnancy *Schiff J* 94 08

By Surg Gynec. & Obst.

The author gives a short historical sketch of the evolution of the treatment of ectopic pregnancy and also criticizes some of the methods now in vogue. He reviews the last fifty cases which have been under his care. Six had recurrences in the tubes remaining—of this he is positive as he performed a subsequent operation for ectopic pregnancy. He knows that patients have since had one or more pregnancies in the uterus. The figures are not accurate as he was unable to locate all the patients in the list.

The author is opposed to the removal of the opposite tube unless it is obviously hopelessly diseased thus making it possible for pregnancy to occur in the uterus. EDWARD L. CORVILL.

Farrar L. K. P.: Interstitial Pregnancy; with Report of a Case. *Post-Graduate* 1914 xxix 168

By Surg Gynec. & Obst.

Farrar gives a collective review including history etiology course diagnosis and treatment and bibliography of interstitial pregnancy and reports a case occurring in his practice. HENRY SCHMIDT.

Phillips, M. H. A Case of Peritoneal Implantation of an Ovum. *J. Obst. & Gynec. Br. Emp.* 94 xxv 31

By Surg Gynec. & Obst.

Abdominal section had been performed on a patient for profuse intraperitoneal bleeding. As blood was oozing from among the fimbriae of the left fallopian tube this tube was removed. Later on careful examination of the tube showed that the bleeding was due to the presence of small areas of trophoblast and early chorionic villi situated at the bases of two of the fimbriae but there was no complete implantation sac. On the other hand a hemorrhagic nodule with a peritoneal covering which was excised from the lateral pelvic wall has been found to contain an early ovum completely embedded in the extraperitoneal connective tissue. This peritoneal mass an ovum a little less than one inch in diameter was made up chiefly of blood-clot with a serous coat externally. More deeply the nodule was covered by lobules of fat and areas of edematous alveolar tissue. Serial sections showed marked dilatation of the blood vessels and in the middle portion a compressed and distorted ovum. Its longest axis measured 15 mm. There was no embryonic rudiment but simply a blastocyst with

its external covering of cyto- and plasmodi trophoblast in single and multiple layers, and a mesoblastic core of a poorly staining matrix with occasional stellate cells. The trophoblast and stroma showed localized projections indicative of early villous formation. The ovum was surrounded by a lacunar space containing blood corpuscles and some poorly staining trophoblast.

The tube showed at the bases of the fimbriae a small blood clot beneath which were several strands of chorionic villi and small clusters of cellular and plasmodial trophoblast all staining well. The author suggests that the fimbrial end of the tube has formed part of the implantation site of the ovum that it has been separated from the ovum and the rest of the implantation site but has retained a few villi and some trophoblast. This separation probably occurred some considerable time previous to the hemorrhage which occasioned the operation. CAREY COLLESON.

McAllister F. J.: Eclampsia. *Iowa M. J.* 1914 xx 436

By Surg Gynec. & Obst.

McAllister relates his experience with eclampsia and reports six cases.

In the first case eclampsia occurred at term and immediate delivery stopped the convulsions. In the second case eclampsia occurred during the sixth month of pregnancy. This case was also delivered and given veratrine after four days of unconsciousness she recovered. The third case was one of eclampsia two hours after a normal delivery.

The fourth case was a primipara, six months pregnant. Her urine was loaded with albumin. The delivery took place 15 hours after the onset but the patient died. The fifth case was one of eclampsia on the ninth day. The delivery was normal and at no time was there albumin in the urine. The patient died in spite of rigorous treatment. The sixth case was a primipara of 23 years who was at full term when the convulsions began. Her urine contained over 5 per cent of albumin. She was treated for rapid pulse and fever and after several days recovered. EUGENE CAR.

Cerecedo, M. The Most Effective Treatment of Pernicious Vomiting (Die wirksamste Behandlung unstillbare Erbrechen). *Spl. Med.* 93 1254

By Zentralbl. f. d. Ges. Gynaek. u. Geburtsh. d. Grenzgeb.

Seven cases that had been treated without effect by other methods recovered readily upon the administration of drenaline 10 drops of a 1:1000 solution twice daily by the mouth subcutaneous injection was not necessary in any case. In one

case 10 to 20 drops of a 1 per cent cocaine solution before each meal was a valuable auxiliary treatment and where there was serious loss of strength nucleositol was given one injection daily for ten days repeated after a week's pause.

Vomiting in pregnancy as well as eclampsia is instigated by the ovum but its primary cause is probably an insufficiency of metabolism in the liver and secondarily in the kidney from intestinal intonation therefore diet is an important prophylactic treatment for both conditions. A milk and vegetable diet should be given. Bowel movements should be kept normal by cholagogues such as rhubarb cascara and calomel. MICHAEL.

Schüpbach A: Pernicious Anæmia in Pregnancy and Labor (Über perniziöse Anämie in Schwangerschaft und Wochenbett) *Cor Bf f Schweiz Arch* 1915 xliii, 535.  
By Zentralbl f d ges Gynäk u Geb rth s d Grenzgeb.

This disease is often observed where pregnancies follow one another too quickly and lactation is prolonged. It is distinguished from cryptogenic pernicious anemia by the fact that it is curable. A constitutional factor is the cause of it, perhaps also an insufficient formation of antihemolysins for the synthesis of iron that takes place on the surface of the placenta under the influence of the syncytial plasma.

The decrease in iron absorption in the second half of pregnancy points to the formation of antihemolysin. The morbidity among pregnant women is 0.15 to 0.25 per cent. There is exhaustion, yellowish pallor, edema, dilatation of the heart, heart murmurs, often premature delivery after which the mother's condition grows worse. The mortality according to the Italians is 25 to 50 per cent according to Fayr 100 per cent. If anemia appears shortly before delivery the prognosis is bad; if during the puerperium better. The infantile mortality is due to premature delivery. MOUX.

Kohlmann W: The Cesarean Section in Ante-Partum Hemorrhage. *V. Ost. U. & S. J.* 1914 lx i 655. By Surg. Gynec. & Obst.

Kohlmann states that in cases of central or lateral placenta previa pregnancy beget at or near term the living child the mother in good condition the cervix closed or only slightly dilated cesarean section should be the operation of choice.

The author cites a case of central placenta previa which he operated. The mother and child left the hospital on the ninth day in good condition.

In premature separation of the placenta or abruptio placentae the author also advocates section. He reports a case of this kind which he operated upon with excellent results. The hemorrhage in this case began after a coughing spell near full term and could not be stopped by tampons. In this case a piastum was given as a hemostat. Just before the uterus was opened and erythritol blood was lost. L. C. A. V.

MacLaren A and Daugherty L. E.: Intraperitoneal Hemorrhage with Special Reference to Hemorrhage from Ruptured Tubal Pregnancy. *St. Paul M. J.* 1914 xvi 137.  
By Surg. Gynec. & Obst.

The authors call attention to the fact that intra-peritoneal hemorrhage resulting from trauma direct or indirect is of frequent occurrence. Also that the amount of force exerted by a blow on the abdomen and the visible signs of injury are no index to the damage done to the internal organs. Direct violence is not necessary for cases have been reported where a simple muscular action has produced a rupture of the liver or spleen.

Of the solid viscera the liver is most frequently the site of a tear. Crushing injuries are perhaps the most common. Tilton reported 365 cases of injuries to the solid viscera. Of this number 189 were of the liver and 176 of the spleen, kidney and pancreas. Hemorrhage from the liver is best controlled by packing the rent with gauze.

Rupture of the spleen follows next in frequency after the liver. Many of these cases show previous disease of the spleen. Not infrequently it happens that the capsule itself is not injured and while the laceration may be of great extent yet the bleeding into the peritoneal cavity will not occur until the capsule ruptures from internal pressure. In such cases the diagnosis is extremely difficult. Rupture of the spleen requires its removal and this may be done without hesitation.

Rupture of the pancreas or injury to the mesenteric vessels while not so common do occur and should always be considered in making a diagnosis.

Probably the most frequent cause of intra-peritoneal hemorrhage is due to some form of extra-uterine gestation. The causes of ectopic gestation are theoretical to a very large extent. The inflammatory theory of Tait and the mechanical theories are given none of which are satisfactory.

Immediate operation except in the moribund cases is advised and any dilatory procedures are characterized as dangerous.

The question of the removal of the tube in these cases is sometimes very important from the standpoint of the patient and will have to be determined by the cause of the abdominal pregnancy and the danger to the woman's life. At all odds it should be borne in mind that in certain selected cases it is justifiable to leave the tube thus giving a ray of hope to the woman that she may again conceive.

When a pelvic hematoma has formed and there are no further signs of hemorrhage it should be left alone for it will be absorbed in time. If the hematoma becomes infected and goes on to abscess formation a post-vaginal section should be done and drainage inserted then if necessary a laparotomy should be done later when the previous vaginal drain will be in the best possible position and will assist erythritol in the ultimate recovery of these very bad cases.

A report is given of 54 ectopic gestations treated

by the authors in the last 22 years. Out of these 55 cases 6 died, giving a general mortality of 11 per cent while in the last 11 years 33 of these 55 cases were treated with only one death

HARVEY B. MATTHEWS.

Boero, E. A.: Treatment of Haemorrhage with the Placenta Located in the Lower Segment of the Uterus (Behandlung der Blutung beim Sitz der Placenta auf dem unteren Uterinsegment). *Rev. Soc. med. argent. Buenos Aires* 913, 221 535. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

Cesarean section is rejected as a treatment for placenta prævia. The assertion that the low insertion of the placenta robs the lower uterine segment of its contractility by the proliferation of villi in the musculature and that it is therefore a physiological necessity to avoid its distention in delivery by means of cesarean section, is disproved by the demonstration of hardened specimens and by showing the extraordinary rarity of rupture of this segment in placenta prævia. The only case of rupture that the author knows of occurred on the side of the cervix opposite to the point of insertion.

Among 80 cases of placenta prævia treated conservatively in the author's clinic during the past 6 years, 3 died of acute anemia—3.75 per cent—and two of infection—2.50 per cent. Two of the former had almost bled to death when they came in, so that only one death can really be accredited to the clinic—1.25 per cent. The morbidity of the remainder in the puerperium was 24 per cent, infantile mortality 70 per cent, among these 22 came to the clinic dead and five in a very serious condition, 29 died in the clinic—36 per cent—and 24—30 per cent—survived.

After reviewing the various surgical and obstetrical methods of treatment the author comes to the following conclusions: (1) The ease with which the cervix can be dilated in placenta prævia indicates that the natural route should be utilized in its treatment. (2) The low maternal mortality when treatment is undertaken at the right time does not justify cesarean section after the beginning of labor nor premature delivery. (3) By good obstetrical training the mortality of three-fifths of the cases due to active interference and infection can be lessened. (4) Complications of placenta prævia may demand cesarean section. (5) In central placenta prævia the technical skill of the obstetrician should decide the question. (6) The prophylactic treatment of abnormally situated placenta should consist in sending the patient at once to a hospital which would lessen both morbidity and mortality.

MICHAEL.

Kreiss, P.: Heart Disease and Pregnancy (Herzfehler und Schwangerschaft). *Zentralbl. f. Gynäk.* 29 3, xxvii, 203. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

Heart disease is only rarely made worse by pregnancy. From 1903 to 1912 at the Dresden

gynecological clinic pregnancy was artificially ended on account of uncompensated heart lesions only 26 times, 1.1 per cent, among 23,577 deliveries and abortions. Of the 26 cases 4 died.

The coincidence of heart disease and nephritis is especially dangerous but there is no absolute indication for the interruption of pregnancy. First absolute rest is necessary then treatment according to the rules of internal medicine with digitalis, caffeine, camphor, adrenalin, and alcohol. If edema and serous effusions do not disappear and congestion, especially of the kidneys, cannot be overcome then abortion is indicated.

If the heart disease is very severe or combined with other serious diseases the preliminary attempts to avoid abortion may be omitted. A signal cesarean section is to be rejected if there is extreme congestion, on account of the danger of hemorrhage. In such cases if the child is living the classical cesarean section should be performed so as to spare the heart the effect of the pains.

HUACR.

Jaachke, R. T.: Prognosis of Diseases of the Kidney in Pregnancy Especially in Women with Heart Disease. *Arch. f. Gynäk.* 29 3, 1, 396. By Zentralbl. f. d. ges. Gynäk. Geburtsh. a. d. Grenzgeb.

Only those kidney diseases are of importance that are accompanied by an increase in blood pressure and therefore make greater demands on the heart. The acute form of the so-called kidney of pregnancy shows little or no increase in blood-pressure and is amenable to treatment. It places practically no burden on the heart. The chronic form on the other hand makes great demands on the heart and is very difficult to treat. The prognosis is made worse by the fact that in 6 to 8 per cent of the cases eclampsia threatens with its enormous demands on the heart. It is often difficult to decide whether it is a case of disease of the kidney of pregnancy, or of chronic nephritis.

There are forms of the kidney of pregnancy that are almost impossible to treat. The pressure going up as high as 230 to 240. These kidney affections are almost as hard on the heart as chronic contracted kidney. Its work is so enormously increased that even a previously normal heart may fail. The situation is especially dangerous in pregnancy if there is a combination of heart and kidney disease. The prognosis depends on the condition of the heart muscle. In any case it is a very serious complication and the author recommends in all cases of pregnancy in women with heart disease complicated by a kidney disease in which there is increased blood pressure that pregnancy be interrupted and so by lessening its work to give the heart its only chance.

HARR.

Schenck, B. R.: Pulmonary Tuberculosis and Pregnancy. *J. Mich. St. M. Soc.* 9 4, xii, 57. By Surg. Gynec. & Obst.

There is by no means a unanimity of opinion regarding the treatment of the pregnant woman

afflicted with pulmonary tuberculosis. At the last International Tuberculosis Congress the most variant views were expressed some holding the older idea that it is best in most cases to allow the pregnancy to continue others stating most emphatically that radical measures should be taken to end the gestation.

It has been estimated that there are annually in the United States from 22,000 to 44,000 tuberculous pregnant women. It is probable that there are annually in the state of Michigan from 700 to 900 pregnant women who have active tuberculosis.

In considering the propriety of therapeutic abortion a sharp distinction must be made between those patients who have a quiescent or a healed lung lesion and those in whom the process is active. A failure to make this distinction accounts to some extent for the differences of opinion which have been expressed. Moreover the history of a healed lesion or the assumption on insufficient grounds of present trouble has far too frequently been used as an excuse for terminating a pregnancy.

Spontaneous abortion rarely happens as an effect of pulmonary tuberculosis. It occurs only in the case of patients prone to miscarry on account of extensive lacerations where the added strain of coughing is adequate to bring it about or where there is sufficient toxemia to cause the death of the fetus. In the vast majority of cases the child develops normally and reaches term comparatively unaffected. Such children should be separated from the mother immediately after birth. Theoretically healthy children may be born of tuberculous mothers and if properly treated live to adult life. Practically however this ideal is not reached for Ziehl reports a mortality during the first year of such children of 58 per cent. Diebel 78 per cent. Weinberg 78 per cent. Pankow and Kupfele 54.5 per cent.

The effect of pregnancy on the pulmonary lesion. If we will go over the histories of a number of sanatorium patients, we will find that in many cases the active trouble is dated back to a certain pregnancy or puerperium. At the present time the weight of authority favors the view that pregnancy affects pulmonary tuberculosis unfavorably. Prophylaxis is therefore most important.

Pregnancy having taken place each patient must be carefully studied and each case judged according to all the circumstances. It would appear that there is now sufficient justification for therapeutic abortion in practically all cases of active tuberculosis. With our present knowledge of the subject there is no justification in any but the rarest cases for either the operative sterilization as advocated by Schottelius, Bacon, Schauta, Hochne and many others or for the X-ray sterilization supported by Gauss nor does it seem right either to remove the uterus and ovaries championed more particularly by Martin or to vaginally excise the fundus of the uterus and the placental site recommended by Bardeleben.

Gardner W S Fibroids and Pregnancy Three Cases. *Id M J* 1914 lvi 56

By Surg Gynec & Obst

The first case reported by the author was operated early in the third month of pregnancy and an ovoid fibroma measuring fifteen by sixteen centimeters removed. The tumor was attached by a short but narrow pedicle to the uterus near the junction of the body with the cervix. This patient went to term and was delivered of a nine pound boy. The tumor in this case was anterior to the uterus and would have interfered with the rising of the uterus.

The second patient had a fibroid tumor which almost filled the true pelvis. She was allowed to go to term when a hysterectomy was performed after delivering a nine pound child by cesarean section.

In the third case the fibroid was located in the lower segment of the posterior uterine wall. There was no dystocia, as the tumor was above the brim of the pelvis. This patient was delivered normally. She had a submucous fibroid removed a year before she became pregnant. C H Davis

## LABOR AND ITS COMPLICATIONS

Garrett N M Management of Labor in Cases with Relatively Contracted Pelves. *S G Gynec & Obst* 1914 iii 588

By Surg Gynec & Obst

The following questions were sent by the author to a number of obstetricians and surgeons:

1. Number of cases observed?
  2. Where you have charge of the case primarily what method of treatment do you prefer?
  3. Do you consider the high forceps operation justifiable?
  4. In cases that have been allowed to go to term and cannot be otherwise delivered do you prefer cesarean section or pubiotomy?
  5. Which operation has the greater mortality?
  6. What has been your experience as regards union of the bone after pubiotomy?
- Including those observed by the author 2,935 cases were reported.

Practically all agree to the high forceps operation under certain circumstances.

Replying to question 4 four obstetricians representing 305 cases prefer cesarean section. Four others representing 1,630 cases prefer pubiotomy under certain circumstances. The majority say that cesarean section produces greater mortality. Union of the bone after pubiotomy is satisfactory in nearly all cases. It is more frequently fibrous than bony.

The author recommends

1. Premature labor at or after the thirty-sixth week.
2. Cesarean section, if not seen until term but before infection and exhaustion have taken place with conjugata vera under three and one fourth inches and the child viable.

3 With a conjugate of three and one-fourth inches or greater mother and child both in good condition and the head can be made to enter test of labor followed if necessary first by forceps second by pubiotomy

Uljanowsky L. W. Hematomata of the External Genitalia and Vagina during Delivery (Zur Lehre der Hämatoeme der äusseren Geschlechtsorgane u. Vagina während der Entbindung) *Zeitschr f geb. u. Gynäk.* 913 xxvii, 1905  
By Zentralbl f d. ges. Gynäk u. Geburtsh. d. Grenzgeb.

The author describes a case of large hematoma of the anterior wall of the vagina with severe hemorrhage in a 20 year-old primipara and says that such hematomata of the genitalia and vagina are rare—1:2000. They appear oftener in the vulva than in the vagina. The etiology is not known with certainty. Uljanowsky gives as contributory causes quick delivery changes in the vessel such as varices and changes in the blood in diseases of the kidney. *GROSSO.*

Crump, W. G. Fitzpatrick, G. Huntoon, G. A. and Richards, R. M. Symposium on the Conduct of Normal Labor. *J. Am. M. A.* *Bonap.* 1914, vi, 695. By Surg. Gynec. & Obst.

Crump emphasizes the necessity of carefully instructing girls as well as boys in gymnastics in order to better the future generations physically. He believes that the state should prohibit marriages of youths under 20 to 21 years of age. Gestation earlier than this is not only more dangerous to the mother but the child is all too often a weakling. The essentials of homemaking should be taught in the schools as well as the home. The physician should consider more carefully the physiological and pathological processes taking place in the female organism and by a better understanding of the normal try to work out some helpful rules of procedure to correct the abnormal. Contra y to the preconceived ideas and teachings of physicians of the past and even to-day the uterus does not lie normally in a constant position of immobile ante-flexion. It readjusts itself to various forces brought to bear upon it. It gradually comes to assume an incorrect position from faulty pelvic inclination or the transmission of abnormally created forces. These forces should be thoroughly understood in order that developing girls may be so counseled that they may continue in health as they grow in stature and round out into the fullness of mature development. The question of faulty bodily posture is discussed and recommendations made for overcoming it. The author dwells on constipation and suggests that the stool now in use should be discarded and one much lower employed.

FITZPATRICK emphasizes four essentials in the successful practice of obstetrics viz proper mental attitude on the part of the physician every pregnant woman should be regarded as a pathological case every obstetrical case a surgical case and

fitness and equipment. Under these headings he discusses the subject. He believes the mental attitude of the physician should be that of everlasting consideration for the patient he should be constantly mindful of her condition he should recognize the fact that a great number of women feel embarrassed as soon as the abdomen becomes distended. A few words and a little encouragement will let her understand with what pride—with what interest and solicitation—she is looked upon.

The physiology of pregnancy borders so closely on pathology that at times it is difficult to say when the one has overstepped the other therefore every pregnant woman should be considered a pathological entity. Obstetrics is surgery according to this author. A surgical condition exists where there is the letting of blood. Where there is letting of blood there is an open wound which is liable to become infected. Regarding the fitness of a physician, Fitzpatrick states that no man after graduation and attendance on a few hundred cases of obstetrics should assume that he knows so much about the subject that it is not worth while to attend obstetrical clinics. The need of sterile supplies even in home deliveries is strongly urged. The article was ably discussed by several members.

HUNTOON takes up the care of the pregnant woman emphasizing that prevention is the essential feature during this period. The patient should be seen every four weeks during the first seven months and at least every two weeks during the last months of pregnancy. Personal hygiene, clothing diet and the care of the nipples are then discussed.

RICHARDS discusses the care of the patient during the puerperium emphasizing the importance of thorough cleansing of the vulva after delivery with some antiseptic solution, and the placing of a cotton pad over it. Lacerations should be sought and repaired. The uterus should be carefully watched at five-minute intervals to determine the involution. The indiscriminate use of ergotism is condemned. He does not deem the abdominal binder essential in every case—only where the abdominal wall is greatly relaxed. The treatment of after pains the diet, the care of the nipples and the regulation of the bowels and bladder are then taken up. He does not believe that it is advisable to allow the patient to leave the bed before the tenth day. *EDWARD L. CORNELL.*

#### PUERPERIUM AND ITS COMPLICATIONS

Vineberg H. N. Septic Puerperal Infection. Diagnosis and Treatment. *C. M. A. J.* 914, v 201. By Surg. Gynec. & Obst.

The author states that cultures should be made in every case of suspected puerperal infection but he does not place much confidence in these findings, because of the fact that a non hemolytic streptococcus may revert to the hemolytic variety and vice versa. He believes that temperatures should

be taken B 1 d. per rectum in all cases and that when fever is found an immediate search should be made for the cause

If the bowel is full of fecal material obstructing drainage from the uterus it should be emptied after which the temperature will usually return to normal. A careful examination of the perineum and generative tract should next be made, sutures cut if necessary and any tears in the cervix carefully gone over. If nothing is found the uterine cavity should next be explored by the finger for in the author's opinion 90 per cent of puerperal infection arises in the uterus from placental remnants.

When remnants are found the author believes in a mechanical removal by the curette or some other means and very strenuously disagrees with Watkins' method of packing the uterus thus causing it to contract and expell the contents. Laneberg believes this prevents free drainage and may cause a generalized infection. After curettage he usually irrigates the uterus with a weak iodine solution or 50 per cent alcohol and then lets it alone. The curette should be used only when placental remnants are palpated by the finger.

In cases of thrombophlebitis the author thinks that the important diagnostic signs are the great range of the temperature 5 to 6° and the steady pulse 80 to 120. He has ligated the affected veins in nine cases and thinks the best results are obtained when a total hysterectomy is also done. The author advises hysterectomy post partum in cases where there is an infected submucous fibroid or in purulent metritis. In his experience only 10 per cent of cases need surgical interference. J. C. A. M.

**Traugott M: Etiology and Prophylaxis of Endogenous Puerperal Infection (Über die Ätiologie und Prophylaxe der Endogenen puerperalen Infektion). Z. fr. B. f. G. 28, 93, 22 u. 869.**  
Bj Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

A report is given of the systematic bacteriological examination of the vaginal secretion of 1,004 pregnant women, 1,851 of whom were delivered spontaneously, 75 by manual extraction in the breech position, 68 by operation through the natural route. Those who had an axillary temperature of more than 35° during the puerperium were as follows: Of the spontaneous deliveries 95.7 per cent without streptococci, 85.3 per cent with non-haemolytic streptococci, 0.1 per cent with haemolytic streptococci of the breech presentation 10.7 per cent without streptococci, 55.1 per cent with non-haemolytic streptococci, 1.0 per cent with haemolytic streptococci. In operations by the natural route 25 per cent were without streptococci, 17.14 per cent with non-haemolytic streptococci and one patient with haemolytic streptococci had a rise of temperature one day to 38°.

All of the women with the exception of those who were delivered by periotomy were examined only per rectum with sterile gloves. From this it appears that the prognosis of the puerperium of

pregnant women without fever examined only per rectum is a matter of indifference whether there are streptococci in the vaginal secretion before delivery or not. Neither does the number of streptococci found make any difference. The streptococci in the vaginal secretion of pregnant women play a very subordinate part as compared with other factors.

The author doubts the value or necessity of Zweifel and Schweitzer's irrigations of the vagina during pregnancy with 5 per cent lactic acid, as there was no difference in the puerperal morbidity of pregnant patients with streptococci who according to Schweitzer should have been treated by this method and those without. Insufficient lactic acid irrigations seem to increase the morbidity during the puerperium for Schweitzer had 22 per cent morbidity among such patients. Even the disappearance of streptococci from the vaginal secretion cannot always be attributed to the irrigations, among 48 pregnant patients the streptococci disappeared in 11 cases in from 5 to 31 days without any treatment. A. Horowitz.

**Montgomery L. E. Puerperal Sepsis and the Present Methods of Treatment. P. n. M. J. 1914, LVII, 425.**  
By Surg. Gynec. & Obst.

The author emphasizes the importance of making a correct diagnosis of sepsis and determining the particular forms of infection, i.e. sapremic or septic.

The use of the curette is discouraged because it opens new avenues of infection. Decomposition products may be removed digitally if there is no peritoneal nor perituminal inflammation. The patient is put in the Fowler position, a purge given occasionally, nourishment should be of the highest nutritive value with as little waste material as possible. Elimination is promoted by the continuous instillation of salt water per rectum and ice kept on the abdomen to limit the extension of the inflammation and facilitate evacuation of the uterus by inciting muscular contraction. Hot fomentations are substituted for ice in the later stage to hasten absorption of the exudate. Pus accumulations are evacuated surgically if necessary. Medication is given hypodermically as far as possible to avoid disturbing the alimentary canal, strychnine, ergot and atropine as indicated.

Fresh anti-streptococcal serum in initial doses of 10 to 20 cubic centimeters and 10 cubic centimeters every twelve hours for two days is advised until its efficacy is determined.

The résumé is that (1) "the diagnosis of puerperal sepsis established the aim of treatment must be conservation of the vital forces through rest, judicious feeding, stimulation or elimination and the intelligent promotion of immunity." (2) "The employment of the curette and intra-uterine treatment is consistent with the above conservation." (3) "Serum given fresh and in good quantity is of value. The administration of stock vaccines should be condemned. The value and place of the au-

togenous vaccine is yet to be determined (4) Surgery except for drainage in suppurative peritonitis should not be employed in the acute stages. The localization of the infection may later necessitate incision for drainage or resort to sacrificial operations in involving tubes ovaries and even uterus

D H BOYD

### MISCELLANEOUS

King, W W The Serum Reaction in Pregnancy and Cancer by the Coagulation Method  
Obst & Gynec Brit. Emp 1913 xiv 296.  
By Surg Gynec. & Obst

The technique employed by King is essentially that of Abderhalden. His conclusions are as follows

1 The test is positive all through pregnancy  
2 It may be negative in pregnancy in the presence of severe septic infection.

3 With certain limitations it is possible to diagnose carcinoma and sarcoma but not to differentiate them from pregnancy because the ferments are not absolutely specific

4. The coagulation method is useful because it does not require special apparatus it avoids the errors associated with faulty dialyzers and it is not so susceptible to slight hemolysis of the serum. This method however requires at least 6 hours incubation and the use of 0.3 ccm of a 1 per cent solution of nuxhydrin in order to obtain positive results in pregnancy  
CARRY COLEBROOK

Faught F A: Significance of Elevated Blood Pressure in Pregnancy J Am M Ass. 9 4  
Jan 518 By Surg Gynec. & Obst

The author calls attention to the fact that high blood pressure may occur in pregnant women with out any concomitant signs of toxemia just as is seen in chronic kidney cases. These should be separated from the pregnant cases showing even a moderately elevated blood pressure accompanied by some or all of the familiar signs of toxemia of pregnancy. The former need special watching but they should by no means be looked upon as subjects for surgical interference. This indicates the importance of careful clinical observation in addition to blood pressure studies. In this connection the urine will often but not always, serve as a valuable guide.

In toxemia cases, the gradually rising pressure the persistent nausea the head pains and the characteristic urinary findings all point to an acute and progressive condition. Two illustrative cases are reported  
EDWARD L. CORVELL

Nebeaky O Caput Succedaneum (Beitrag zur Kenntnis des Caput succedaneum) Monatsh f Geburtsh u Gynak. 9 3 xlviii, 655  
By Zentralbl. f. d. ges. Gynak. Geburtsh. u. d. Grenzgeb

A 37 year-old IV para after seven hours labor delivered a child with an enormous caput succedaneum 5 1/2 cm in height 27 cm in circumference and 6 to 7 cm in diameter. It was surrounded by a marked groove due to compression. It had almost

disappeared at the end of four days and after 18 days the necrotic tissue was completely cicatrized. The author believes this abnormal swelling was due to the internal os the circular muscle and connective tissue bundles of which act as an unyielding ring on the presenting part of the child and by its rigidity causes injury to the tissues even when the pains are weak because of the long duration of labor. The acquired rigidity of the tissues he thinks is due to chronic metritis  
MORALLER

Giuffrida, F A Plea for More Pelvimetry J  
Nat M d 1914 lx 541 By Surg Gynec. & Obst

The author makes a strong plea for the greater use of the pelvimeter. In comparison he calls attention to the fact that carpenters who do good work will not trust to luck. They employ calipers and measurements before cutting lumber while many physicians guess the pelvic measurements of a woman who is about to undergo a hard ordeal. It is impossible to know what will occur where so many possibilities exist especially in primipara. Any one practicing obstetrics regularly will some day meet with a badly contracted pelvis and if measurements have not been taken, it will be greatly regretted. Every woman should be measured. The pelvimeter is not an expensive instrument and takes up but little room  
EDWARD L. CORVELL

Hytin T Experimental and Clinical Study of Air Embolism in Obstetrics (Die Luftembolie in der Geburtshilfe Experimentell klinisch Untersuchung) Arch f Gynak. 9 3 ci 273  
By Zentralbl. f. d. ges. Gynak. u. Geburtsh. u. d. Grenzgeb

From experimental and clinical study the author doubts the correctness of the theory of air embolism in obstetrics—at any rate it seems to be greatly exaggerated—and is not so certainly decided that it should be accepted without further investigation.

Each case should be subjected to searching analysis. The same rules must be followed in all cases and every autopsy in a suspected case of air embolism must be carried out in the same way. All the blood vessels leading to and from the heart must be ligated separately and the lungs and heart removed. The heart cavities, the pulmonary arteries and their branches should be opened in a deep vessel under water after ligation of the arteries and washing out of the air vesicles on the surface. In this way attention will be drawn to the way in which the air is expelled whether as a thin emulsion as foam or as large air bubbles. The amount and kind of air in the pulmonary artery and the intensity and extent of the pathological changes in the lungs must serve as a basis for the post mortem diagnosis of air embolism  
JAKOBA

Oppenheimer H, Pituitrin in Obstetrics (Pituitrin in der Geburtshilfe) Arch f Gynak. 9 3 ci 301  
By Zentralbl. f. d. ges. Gynak. u. Geburtsh. u. d. Grenzgeb

In the course of a year and a half 400 cases were treated. Pituitrin and pituitrin were used sub-

cutaneously and intramuscularly generally in doses of 1 to 2 ccm. no difference could be noted in the effect of the two. The indication for pituitrin is weakness of the pains toward the end of the first and during the second stage. Labor can only occasionally be induced by pituitrin. Several injections of pituitrin do not harm the mother in any way. When given according to indications it produces strong pains in 90 per cent of the cases and brings about spontaneous delivery in 80 per cent—10 per cent of failures must be counted on.

Fifty per cent of the cases treated unsuccessfully with pituitrin during labor show a tendency to hemorrhage in the third stage and after delivery of the placenta but in successfully treated cases hemorrhage and post partum atony appear after delivery of the child in only 7 per cent. In hemorrhage during the third stage and post partum atony a combination of pituitrin and secacronin is recommended. If bleeding continues in spite of this it is generally because remnants of the placenta have been retained. The third stage is shortened after the administration of pituitrin in only a small percentage of the cases frequently it is lengthened in comparison with the third stage in normal deliveries. *Scimura*

**Schnell F.** The Treatment of Osteomalacia in the Last Few Years, 1898 to 1912 (Die Behandlung der Osteomalacia in den letzten 15 Jahren 1898 bis 1912). *Ztsch f Geb r k u Gynäk* 93 lxx 179. By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb.

The author's work is based on 334 cases of osteomalacia from the literature of the past 15 years. Of these 37 were treated with phosphorus 105 by castration among which there were 7 recurrences 36 with adrenalin 16 with pituitrin 1 with antithyroidin 2 with the milk of castrated goats 6 with roentgen rays.

The research of recent years has rejected hyperfunction of the ovary as the cause and substituted for it the conception of changes in metabolism from the action of the ductless glands. The relation of the hormones in physiological chemistry is not yet clear and therefore there is no really reliable method in the treatment of osteomalacia. Castration offers the fewest bad results and is much to be preferred to the treatment with hormones adrenalin pituitrin, etc. *(Rö. u. W.)*

**Von F. Henberg R. and Doll A.** Biological Relations between Mother and Child (Über die biologische Beziehung zwischen Mutter und Kind). *Ztsch f Geb r k u Gynäk* 93 lxx 35. By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb.

In order to determine the relations between mother and child the authors examined the blood of the mother the umbilical cord serum the blood of the child shortly after birth and also when possible several months later and also the mother's milk on the seventh day after delivery. In a series of experiments they determined the agglutinating power toward different bacteria and then tested for the presence of normal bacteriolytic substances and compared them in given quantities of serum they also tested for the content of hemagglutinins in the blood-cells of rabbits. The result was that they found a marked independence of the child from the mother the child's body at birth forms normal antibodies independently. *Mo. Wenz.*

**Raubitschek, H.** The Relation of Maternal Diseases to the Organs of the Fetus and New Born Child (Über Beziehungen mütterlicher Erkrankungen zu den Organen der Feten und Neugeborenen). *Beit z path Anat u allg Path* 1913 I 345. By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb.

The author has endeavored to determine under what conditions blood poisons of the mother are transmitted to the fetus and cause the same or similar organic changes as in the maternal organism. In two cases of eclampsia there was serious disease of the fetal liver and kidneys with numerous hemorrhages in other organs and in a case of chronic parenchymatous nephritis in the mother there was acute glomerulonephritis in the child but in a child whose mother had the typical kidney of pregnancy which is a purely degenerative process there was no disease. In the experimental part of his work the author tries to confirm and extend his human findings by animal experimentation.

Ictero-gen was used as a liver poison and its effect on the mother and fetus studied with the result that the liver of the mother could be seriously diseased without that of the fetus being affected at all. This is probably due to the fact that the whole mass of ictero-gen was anchored in the mother's liver and did not get into the fetal circulation. To test injuries of the kidney the author used subcutaneous injections of uranium nitrate and succeeded in a series of experiments affecting the kidneys of the fetus as well as those of the mother. At any rate substances are formed as a result of the uranium injury to the mother's kidneys that are absorbed pass through the placenta and have a toxic effect on the fetal kidneys. *Knorr*

**Imre J.** Prophylaxis and Treatment of Inflammations of the Eye in the New Born (Prophylaxe d Therapi der Augenentzündung d Neugeborenen). *Orro klt* 10 3 1467. By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb.

At the ophthalmological clinic at Kolozsvár in the last five years 45 or 17 per cent of the infants were treated for gonorrhoea. According to the author's experience this caused unilateral blindness in 56 per cent of the cases bilateral in 27 per cent. It is important that treatment begin early. The gonococci must be demonstrated if there are streptococci also in the secretion the danger to the eye is still greater.

In premature births twins and poorly nourished



Infants the disease is more dangerous. Prophylactically silver acetate is used but that is not sufficient. The mother must be told in order that she may protect her future children.

The eye treatment must be kept up persistently. For the first few days cold compresses should be applied several times a day and irrigations with three per cent boric acid or potassium hypermanganate if the cornea is threatened. Iodine trichloride 1:4000 should be used. If there is infiltration or ulcer of the cornea the lid should not be inverted in irrigating. If the corneal ulcer is centrally located atropine should be given if it is peripheral pilocarpine. In prolapse of the iris pilocarpine is dropped in 2 or 3 times daily. If there is a non-progressive infiltration of the cornea diosin is used either in the form of powder or as a 3 per cent solution. Good results are often obtained with 1 to 2 per cent collargol salve. The disease generally lasts from 4 to 6 weeks. BOCHASOVICS

Gloerer W: Effect of Obstetrical Depression of the Skull on the New Born Infant and Its Bodily Development (Zum Einfluss der Schädel-Impression auf den Neugeborenen und seine körperliche Entwicklung) *Ztschr f Geburtsh u Gynäk* 19 3 Lxxv, 101  
By Zentralbl f d ges Gynäk. Geburtsh. u Grenzgeb

Gloerer objects to the operative treatment of depression of the skull which has recently been recommended by various authors. He advocates a thoroughly conservative treatment and objects even to manipulation of the skull to replace it or to drawing it out with a corkscrew especially if there are no cerebral symptoms, as in that case it cannot have any effect on the later bodily and mental development of the child.

The good results obtained by various authors show that the procedures mentioned above are not especially dangerous. But even when there are cerebral symptoms they are not amenable to surgical treatment. He reports 6 cases from the Würzburg clinic since 1895 and in none of them were there symptoms, such as convulsions and spasticity to indicate local hemorrhage even autopsy did not show injury to the bones or diffuse cerebral hemorrhage so that surgical intervention could have done no good. WINKER

Durham R. Obliterating Cholangitis Associated with Hemorrhage of the New Born *Lancet* Island H J 19 4, vol. 9 By Surg Gynec & Obst

The author briefly reports a case of this condition as follows. The babe a boy was delivered normally and weighed seven and a half pounds. The family history was negative. Three other children born to these parents are living and well. The baby appeared normal at birth. On the second day he was markedly jaundiced but the stools and urine were normal. He nursed normally every two hours.

On the third day the icterus was deepening and the cord dressings were markedly stained with bile. On the fourth day the baby was fretful in the morning the bowels moving five times with black stools. The urine stained the napkins green. In the afternoon, while nursing he was seen to become rigid for a moment and three drams of blood flowed from the nose. The temperature was 99.6° respirations normal, but forced there was some bloody mucus in the throat the pulse was small and about 130 the pupils were equal. The baby was in a stupor. Examination showed a few rales at the base of both lungs. Three hours later another hemorrhage appeared from the nose and mouth. There was no cyanosis. Death followed.

The post mortem findings showed deep jaundice of the conjunctiva and skin. Rigor mortis was marked. There was a large hemorrhagic area on the forehead. All the internal organs were deeply jaundiced. The stomach contained several drams of blood. There were numerous adhesions about the gall bladder and ducts duodenum and pancreas. About the gall-duct these adhesions presented a matted appearance. After careful dissection the gall-bladder was opened and 20 drops of bile-stained mucus were found in it. The gall-ducts were identified as tiny threadlike tubes through which a very fine needle could be passed with effort. It appeared that these ducts were not functioning. The liver was not markedly enlarged.

EDWARD L. CONNELL.

Mosbacher E. Clinical and Experimental Study of the Effect of Thyroid Substance on Labor Pains (Mensch-experimentelle Beiträge zur Frage: Thyreoiden und Wehentätigkeit) *Ztschr f Gebhsh Gynäk* 913 Lxxv, 362  
By Zentralbl f d ges Gynäk u Geburtsh. u Grenzgeb.

Experiments were made in feeding thyroid substance to 30 pregnant guinea pigs and 2 cats, with the result that all of the animals except two aborted. This may be attributed to its effect on the fetus or to a direct action on the musculature of the uterus. To solve this question the effect of thyroglándol, prepared in the same way as pituitárol, was tried on the uterus of the rabbit after previous experiments had shown there was no cardiovascular effect. Many of the experiments were negative but some showed that thyroglándol can cause contractions.

It is worthy of note that preparations that did not react at first reacted after the addition of very small amounts of adrenalin. This confirms the hypothesis that thyroid extract and adrenalin act antagonistically. Experiments on women showed that there was a strengthening and increase of the pains in 2 cases out of 41 with thyroglándol and when adrenalin was added in 7 cases out of 12 but that it had no practical effect in hastening the delivery. KREMAVIER.

# GENITO-URINARY SURGERY

## KIDNEY AND URETER

Oliva C.: Variation in the Adrenalin Content of the Suprarenal Capsules after Different Anæsthetics (Variation du contenu en adrénaline des capsules surrénales après l'anesthésie) *Lyon* ch 1914 xi 11 By *J. Journal de Chirurgie*

The work of Wiesel and Hornowski abroad and of Pierre Delbet Herrenschildt and Beauvy in France has shown the anatomical and functional changes produced in the suprarenal capsules by anæsthesia and especially by chloroform. Oliva takes up this study anew in experiments on the dog, comparing the action of chloroform and ether.

In his first series of experiments Oliva found that the adrenalin content was much higher in etherized animals than in those anæsthetized with chloroform the amount being double and sometimes even more. The difference was found in animals that died under the anæsthetic and in those killed at various periods after the end of the anæsthesia it went on increasing progressively at the twelfth hour the adrenalin content had become normal in the etherized dogs while it remained very low in the chloroformed ones.

These results confirm the prolonged and late effects of chloroform while the effect of ether tops very quickly after the end of its administration.

In a second group of animals the author gave an injection of morphine before the anæsthesia. The dogs killed four hours after the anæsthesia was administered had a much larger adrenalin content after chloroform than after ether on the contrary those killed at the end of 11 hours had a normal adrenalin content after etherization and a very low one after chloroform it seems therefore that morphine does not appreciably change the effect of ether on the suprarenals while it temporarily suspends the toxic effects of chloroform but these effects appear after the morphine is eliminated.

In a third series of experiments one suprarenal capsule was removed before the administration of the anæsthetic and the other one afterwards so their adrenalin content could be compared. A great decrease was found whatever the anæsthetic employed there being no appreciable difference in the effects of chloroform and ether. These results are less conclusive for the trauma due to the first capsulectomy must be taken into account. The control animals who were not anæsthetized also showed a marked diminution in their adrenalin content some hours after the removal of the first capsule. Taken as a whole Oliva's experiments confirm once more the greater toxicity of chloroform as compared with ether. CH. LEBOWITZ

Brooks H. Hypernephroma with Long Standing Symptoms of Adrenal Deficiency with Scleroderma and Sclerodactylia. *J. Cut. Dis.* 1914, xxix 191 By S. G. Gynec. & Obst.

Brooks presents a case of hypernephroma which is unique in several particulars. The patient a musician began at about the age of 15 to practice incessantly on the piano and continued to do so until his death even at the expense of strength and health he practiced long hours in cold unheated rooms. He suffered for many years with frequent attacks of tonsillitis and was never healthy.

Many of the most prominent physicians, both in Europe and America had examined the case and different diagnoses had been made the last one of which was chronic fibroid phthisis with tuberculosis of the mediastinal and retroperitoneal glands. The Moro skin reaction for tuberculosis was strongly positive although tubercular bacilli were never found. X-ray plates showed a mediastinal mass and pulmonary invasion there was marked resorption of bones of the terminal phalanges of the fingers and in some members, almost complete disappearance of this portion of the bone.

Flatness extended from the fifth rib down on the left side with râles and occasional disseminated areas of bronchial breathing alternating with patches of diminished breath sounds. Similar sounds were also present on the right side from the sixth rib down to the liver dullness. Breath sounds were exaggerated over the apices numerous moist râles were present over the entire chest the heart sounds were weak but there were no murmurs deglutition was difficult the pulses were weak but equal and synchronous.

Later in the history of the examination of the case a soft mass was found on the external superior aspect of the humerus. The patient continued to grow weaker and weaker until he was compelled to give up his position.

From time to time he suffered with severe attacks of coughing with expectorations of fibrinous clots of blood. Cyanosis became progressively marked and the retrosternal mass increased in size. Difficulty of swallowing likewise increased. His death occurred a few months later apparently as a result of exhaustion.

The autopsy showed a large indefinite mass in the post mediastinal position united with the roots of both lungs and the pericardial was displaced to the left. The left lung was largely atelectatic and was so carnified as to almost sink in water. It had areas of tumor invasion apparently extending up from the lymph nodes. The mediastinal mass was made up of nodular but intimately adherent masses,

pinkish white. There was no tumor involvement of any other organ except the kidneys and adrenals. The right adrenal was almost completely replaced by a firm pinkish white neoplasm measuring  $2 \times 1$  and  $5 \times 3$  centimeters in diameter. The parenchyma had undergone almost complete atrophy. The medulla of the left adrenal was similarly involved by the growth but the growth could nevertheless be easily separated so that it did not seem to involve the parenchyma of the kidneys. Microscopical examination of this tissue showed it to be one of those peculiar endothelial tumors classified under the head of hypernephroma.

The pathological report of the author does not seem to show anything more than is usually found in these adrenal tumors. The author makes the point that diagnosis should have been made earlier but it was not suggested or even thought of by any physician. He believes that the extreme exhaustion continuing through many years should have led to an investigation of the adrenals.

During the period between the times when the patient was forced to stop work and the time of his death the scleroderma which was evident on the fingers disappeared, the cracks healed up and the thickness of the skin became noticeably less. In the author's opinion the importance of the case is based on the shortening of the bones of the fingers but the X-ray showed no other bony sclerosis or atrophy and he believes that if this bony affection of the fingers was directly connected with the disease of the adrenals there would be other evidence on the skeleton. He therefore thinks that this ductless gland disease had nothing whatever to do with the bone changes that they were in all probability due to the incessant use of the ends of the fingers in striking the keys of the piano extending over a period of from fifteen to thirty four years of age and this point is the author's excuse for reporting the case. He believes that the atrophy of the bones of the fingers was not due to the disease of the adrenals but was an occupational condition as was also the scleroderma at the ends of the fingers.

A. C. STOKES

Frouin A., Meyer A., and Rathery F: Effect of Temporary Ligation of the Renal Vein (Sur les effets des ligatures temporaires des veines rénales). *Compt rend hebdomadaire de l'Académie de Médecine* 1913, 117: 515. By Journal of Chirurgie.

In a series of experiments made on dogs in collaboration with Chéze Frouin found after ten minutes ligation of the renal veins (1) External epilepsy manifested by convulsions and internal epilepsy manifested by vasoconstriction of the abdominal organs (2) some cases of death within 48 hours after the ligation (3) slight histological lesions of the kidney and especially of the liver.

Casati tried to reproduce these results and failed so Frouin Meyer and Rathery tried the experiments again and did not get the same results as the first time only the histological lesions of the kidney

and liver being constant. They could not attribute the difference in results to the anasthesia the method of operation nor to the feeding of the animals and concluded that only the histological lesions, particularly those of the liver are constant in temporary ligation of the renal veins but that the epileptiform attacks and death are inconstant phenomena the cause of which they do not understand.

FRANK CROFT

Bloom J. D.: Kidney and Urinary Bladder Stones Peculiar in Kind and Formation. *U.S. & C.A. Rev.* 1914, 27: 123.

By Surg. Gynec. & Obst.

The writer says that salts of various forms almost in the solid condition may occur in the bladder without the formation of stone. These crystalline substances require a colloid to coalesce the molecule. Certain salts as for instance uric acid may be thrown down and carried out with the urine without the formation of stone. The author says that it requires in addition to the presence of these crystalline substances some irritation to produce albuminoid or colloid of one kind or another. They may be produced in the bladder by any substance such as a bullet blood clot masses of bacteria or a necrotic tissue which has been shown to be the nucleus of stone.

The nucleus of renal calculi of infancy is urate of ammonia. Phosphatic calculi are derived chiefly from lime and magnesium salts in excessive alkalinity the earthy phosphates are precipitated. The phosphate of lime and magnesium unaltered is also deposited. Faulty catheterization defective irrigation or any obstructive condition may be contributory.

The author states that there is a sympathy between the kidneys physiologically and pathologically. In the one instance this is a reflex nature and in the other it is in the nature of a compensatory change. Therefore the location of a stone is not exactly definite. As a rule bladder stones occur singly but one case has been reported where three hundred and even stones were found in the bladder.

The shape of calculi in the bladder is due to the contractions of the bladder. They are usually round but may take on various grotesque shapes. Oxalate stones are of the mulberry formation. Stones are more frequently found in the male especially those leading a sedentary life.

That functional conditions contribute to stone formation the author thinks is undoubtedly true. He submits some specimens on in the form of a duck's foot and some specimens of mulberry calculi which are interesting.

A. C. STOKES

Orr H. W.: The Differential Diagnosis between Kidney Lesions and Pott's Disease; Tuberculosis of the Spine. *Urol. & Gyn. Rev.* 1914, 27: 132.

By Surg. Gynec. & Obst.

Orr describes the differential diagnosis between kidney lesions and early Pott's disease. He emphasizes

sizes the necessity of careful physical examination to determine the presence of Pott's disease and thinks that by careful study an early diagnosis of this disease should be made more frequently than it is.

Judson and others have called attention to the fact that the symptom of early Pott's disease in children is frequently referred to as stomach ache. Moreover he says the muscle rigidity about the point of disease in the spine is frequently so extensive as to communicate itself to the muscles of the flanks and abdomen.

The gait and stooping position of the child with spinal tuberculosis are usually if not almost always characteristic, and if a urinary examination is made it will point to a differential diagnosis between Pott's disease and infections of the kidney.

The author believes that a more extensive use of the X-ray should be made in these diseases. The very great importance of early conservative treatment in spinal lesions makes an early diagnosis imperative. He believes that the answer to this problem at the present day as to the differential diagnosis between kidney and Pott's disease must be in a more careful examination, more accurate observation and appreciation of symptoms.

A. C. STOKES.

Kindberg L.: Study of the Kidneys in the Tubercular (*Études sur le rein des tuberculeux*). *Thèse d'État* Pa. 1913. By Journal de Chirurgie.

Kindberg's report is filled with new facts and ideas and should be read by all who are interested in this question. The subject was opened by Chauffard's discussion of tubercular nephritis and by the controversy between Landouzy and Bernard on one side and Brault on the other in regard to the chronic parenchymatous nephritis of the tubercular. The former assumed that this condition really existed, the latter that it was only a symptom of renal ankylosis.

It has been established that the kidneys of patients with pulmonary tuberculosis are functionally and anatomically normal in the majority of cases. The tubercular toxins if they exist in the circulation do not cause unmistakable toxic lesions in the kidneys. As to the bacilli in the circulation they may produce tubercles generally isolated without alterations in the adjacent parenchyma. A condition often found is amyloid degeneration of the kidneys which seems to attack the liver, spleen and suprarenals before the kidney and is generally more pronounced in those organs. Bernard Castaigne and others believe that it is always accompanied by very marked lesions of the epithelium of the convoluted tubules and is therefore always associated with a nephritis which is not the cause of it but is due to the same etiological factors.

Kindberg showed by histological examination that the tubes were relatively intact but showed hypertrophy, irregular swelling and a clear appearance of the cells. This seems to correspond to the

hypersecretion which is observed clinically. In fact in these cases there is a peculiar functional symptom-complex, consisting in considerable lowering of Ambard's coefficient and a lowering of the chlorides of the serum below the normal though there is sufficient chloruria. This syndrome seems to correspond to an exaggeration in the power of concentration of the kidney. It is very early and enables one to make a diagnosis of amylosis before the appearance of marked albuminuria and cedema. It is not due to the amyloid condition of the kidney itself but represents the reaction of the kidney thus far little involved to the visceral amylosis and the condition of the blood.

Is there a true chronic nephritis of tubercular origin? Not every case of chronic nephritis in a tubercular patient is caused by the tuberculosis and even if inoculation is positive an ordinary nephritis with generalized lesions is not necessarily due to Koch's bacillus but it is nevertheless true that the syndrome of nephritis may depend on massive tubercular infiltration of the kidney. Atypical necroses may be observed interstitial infiltration without follicles and especially cicatricial sclerosis with the lesions definitely localized which sometimes cause the syndrome of mixed nephritis. These are special cases which do not appear to be closely related to ordinary Bright's disease.

Finally there may be peculiar acute lesions of the kidneys not hitherto published found in tubercular patients who have died suddenly without clinical reactions and at the autopsy diffuse subacute lesions have been found such as intense congestion of the renal cortex and various types of necrosis of the cells and tubules. Cases of ventricle acute terminal nephritis have also been found in tubercular patients also cases of transitory acute nephritis of the hemorrhagic type which have recovered without leaving any traces. To explain these latter cases the idea must be accepted of a special reaction of the organs to a second tubercular infection, a special form of anaphylaxis still so little understood in France except in relation to vaccines. In these cases of generalized acute nephritis there is a special sensitiveness created by the first inoculation of tuberculosis. They always occur in patients with pulmonary tuberculosis in the course of development. In these patients a reinoculation with bacilli and perhaps also with soluble toxins by a mechanism which must be determined in each case, causes the anaphylactic reaction which brings about the different types of acute nephritis mentioned depending on its intensity.

On the whole in this important work there is an attempt to restrict the term chronic tubercular nephritis to the types where the influence of the tuberculosis can be readily established. Entirely original points are the description of the urological symptom complex in amyloid degeneration of the kidney and the acute anaphylactic reactions of the kidney in tuberculosis hitherto almost completely unknown.

ANGVILLE

Alessandri R.: Can Renal Tuberculosis be Cured and the Function of the Kidney Preserved (La tuberculose rénale peut-elle guérir avec conservation de la fonction du rein)? *Febsi avril 1913* III, 86. By Journal de Chirurgie

The question as to whether renal tuberculosis can be cured by medical treatment without the organ losing its function must at present be answered in the negative. A few surgeons maintain that there are exceptions to this rule but these exceptions even if they can be demonstrated are rare.

Observation has moreover, shown that renal tuberculosis is subject to remissions sometimes of very long duration due not to recovery but to the walling off of the ulcerocaseous focus. Carlier Desnos and Hertz Boyer have cited cases of this kind which show that the disappearance of renal pain pyuria and bacilluria may result from a partial exclusion of the kidney and not from the definite recovery of the tubercular focus. So that the kidney which had been diseased may show a clear urine which does not contain pus nor Koch's bacilli and is not toxic for the cobra and is almost as rich in extractive substances as that of the healthy kidney when as a matter of fact a part of its parenchyma is transformed into a closed cavity the walls of which contain tubercles in a latent state which may reawaken at any time and reinoculate the bladder and destroy the organ which had been supposed to be cured. He reports two cases.

A woman of 45 had had bladder trouble and pyuria for two years. A hypogastric incision was made and an area of soft fungosities removed from around the left ureteral orifice. There was rapid recovery and complete disappearance of bladder symptoms. Histological examination and inoculation of the cobra showed that the fragment removed was tuberculous. Five years later the patient returned complaining of left lumbar pain. Nephrectomy showed the ureter normal. The upper two thirds of the kidney were also normal. The lower third was merely a sac with caseous contents and a fibrous wall completely closed without any communication with the pelvis or with the ureter. It is evident that five years before the tubercular focus communicated with the pelvis since the area around the ureter had become tubercular.

At the time of the bladder operation the lower calyx was obliterated and the focus thus excluded whence disappearance of the pyuria and bacilluria. This case is related to those described by Casper Pawlof and Key where there was a double ureter draining a kidney. A part of the kidney destroyed by tuberculosis was excluded by obliteration of the calyx of the corresponding ureter. But this case proves especially that the arguments for the spontaneous recovery of kidney tuberculosis with preservation of the function of the organ are not valid. Even if catheterization of the ureter of the supposedly recovered kidney gives a urine without bacilli or pus and not toxic for the cobra it is not safe to conclude that the kidney is well. Therefore

nephrectomy is at present the only rational treatment for unilateral ulcerocaseous tuberculosis of the kidney. E. JEANBAUD

Leguen F.: Use of the Constant in Nephrectomy for Tuberculosis (Des applications de la constante à la néphrectomie). *J. d'uról.* 9, 4 v 1. By Journal de Chirurgie

Three points are to be considered in the application of the urosecretory constant in nephrectomy for renal tuberculosis: (1) its factors, (2) its interpretation and (3) its clinical value.

The constant depends (a) on the functional disturbance which the tuberculosis itself has produced in the parenchyma of the kidney which it has attacked. As a general rule the constant rises in proportion to the amount of renal parenchyma destroyed by the tuberculosis. But it must be remembered that quite extensive tubercular lesions may exist in a kidney without its function being very much disturbed. (b) on the accompanying or consecutive nephritis of tubercular or other origin in the other kidney—the constant rises in proportion to the degree of nephritis in the other kidney. (c) on the compensatory hypertrophy of the healthy portions of both kidneys.

The variations of the constant may be considerable in renal tuberculosis. Leguen has observed as maxima and minima 0.980 and 0.057. Three possibilities are presented: (a) The constant is about 0.70 it is normal the kidneys are functioning well. But the patient may present either perfectly healthy kidneys or a discrete bilateral renal tuberculosis, or a unilateral tuberculosis with integrity of the other kidney which has made up, by compensatory hypertrophy for all that is lost by the diseased one. (b) A constant of 0.100 signifies that the patient has only one kidney or two halves of kidneys. The disease may be bilateral and partial or unilateral and total. It will require catheterization of the ureter to settle this question. (c) The constant is 0.150. Diagrammatically the patient has only one fourth of his kidneys but functionalization may be divided so that operation is contra-indicated.

As to a clinical value when catheterization of the ureters is impossible the constant shows better than any other method the normal functioning of the other kidney and it allows the surgeon to avoid catheterizing the ureters through the opened bladder or performing an exploratory lumbar incision on the sound side. The constant does not settle the question of the localization of the lesions. This must be done by catheterization of the ureters, radiography, clinical examination and exploratory lumbar incision. J. TAYLOR

McCaeskey B. W.: A New Method for Estimating the Function Capacity of the Kidneys by Forced Elimination of Performed Urea. *Med. Rec.* 9, 4, 1913, 507. By Surg. Gynec. & Obst.

The author considers as inferior and unsatisfactory the estimation given by the usual

tests for renal function by elimination of foreign substances of which the phenol sulphonephthalein has proven to be undoubtedly the most valuable. Each of these tests indicate only one phase of kidney function the kidneys may be unimpaired or only slightly impaired in the elimination of certain substances and most seriously affected with respect to others. The elimination of urea being an end product of nitrogenous catabolism is one of the most important phases of kidney function, and it is very possible that its elimination runs parallel to that of other nitrogenous waste products and toxins which are responsible for the syndrome of Bright's disease. A method of estimating this phase of functional activity would therefore be more physiological and rational and would furnish more reliable information than the elimination of any foreign substance. With this object in view McCaskey adopted the following technique.

About 6 A. M. the bladder is emptied. Two hours later the urine is collected and the patient then is given 30 grams of urea dissolved in 4 or 5 ounces of water. Just before taking the urea the patient drinks one-half of six ounces of thin cereal gruel taking the other half immediately after the urea. No other breakfast is eaten. The urine is then collected every two hours for twelve to twenty-four hours the urea determined for each two hour period including the two hours preceding the ingestion of the urea. From these data a curve of urea excretion is constructed. Cases with an excretion of much below 20 grams in 12 hours should be regarded as of somewhat limited functional capacity while one-half this indicates serious impairment.

Contrary to the report of Rowntree and Geraghty the author finds that the urea does not run parallel to the phthalein. He suggests that the functional capacity of the kidneys for chloride and water excretion should be determined by similar methods in suitable cases.

The above urea method is not for routine use but only for properly selected cases and especially for therapeutic purposes in which it is advantageous to know the type of renal block present.

FRANK HYMAN

Smith E. O.: Sudden Death Following Pyelography. *Am J Urol* 94: 2

By Surg. Gynec. & Obst.

The author reports a personal experience in which he injected 20 ccm. of 10 per cent collargol into the pelvis of the right kidney of a woman of 70. About 5 minutes after the removal of the cystoscope the patient died.

The autopsy showed among other things general arteriosclerosis, valvular heart lesions and bronchitis with emphysema. The kidneys showed a chronic interstitial nephritis with an acute superimposed process. Microscopical section of the right kidney showed collargol in the tubules and in a few cells.

The author concludes that the injection of collargol under pressure into the kidney is sufficient to produce shock and in the case of this feeble patient enough to cause the fatal result. He further advises that injections of any preparation into the pelvis of the kidney should be done only by force of gravity.

H. L. SURROW

Ponomareff S. I.: Operation in Subcutaneous Rupture of the Kidney (Über den operativen Eingriff bei subcutaner Nierenruptur). *B. tr. z. kl. Chir.* 1914 LXXX 682.

By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author favors the conservative treatment of rupture of the kidney. The material of the Obuchow Hospital proves that good results can be obtained by this method. In the years 1898 to 1912 57 patients with rupture of the kidney were treated. Of these 57 patients 3 were discharged without being cured and the further course of the disease is not known. Three patients died in all of these three cases there were complications in other organs. Operation was performed in only 8 cases. Frank and Michelson who also treat conservatively give about the same figures as the author for mortality and necessity for operation.

Operation should be undertaken only when it is necessary to life or when it is reasonably certain that complete recovery can be obtained in no other way in severe hemorrhage in infection of the injured kidney or tumor formation in the region of the injured kidney if the tumor shows no tendency to decrease in size but rather to increase.

Operation should be undertaken as promptly as possible if there is a suspicion of an intraperitoneal rupture or injury to other organs in the abdominal cavity. If there is no infection of the kidney operation if performed should be as conservative as possible. The fact is emphasized that it is desirable before the operation to test the other kidney thoroughly by catheterization in case it should be found necessary to perform nephrectomy.

VON HOLST

Schlachko Z. P.: Implantation of the Ureters in the Skin (Einpflanzung der Ureteren in die Haut). *Vrs. k. Cas.* 913 XX 604.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

In order to study the question of what changes the kidneys and ureters undergo in implantation of the ureters into the skin the author carried out 37 experiments on dogs in 23 cases one ureter was implanted in 12 cases both. In 2 cases after the implantation of the one ureter the other kidney was removed. It was found that there was atony of the ureter as a result of disturbances of innervation from cutting it. The atony which was observed in 56 per cent of the cases and which was often coincident with contraction of the skin opening played a part in the entrance of bacteria into the kidney pelvis. Anatomically the ureter was dilated and its musculature thinned. The dilata-

Alessandri R: Can Renal Tuberculosis be Cured and the Function of the Kidney Preserved (La tuberculose rénale peut-elle guérir avec conservation de la fonction d rein). *Folia med* 1913 vi 286. *By Journal de Chirurgie*

The question as to whether renal tuberculosis can be cured by medical treatment without the organ losing its function must at present be answered in the negative. A few surgeons maintain that there are exceptions to this rule but these exceptions even if they can be demonstrated are rare.

Observation has moreover shown that renal tuberculosis is subject to remissions sometimes of very long duration due not to recovery but to the walling off of the ulcerocaseous focus. Caler Desnos and Heitz Boyer have cited cases of this kind which show that the disappearance of renal pain pyuria and bacilluria may result from a "partial exclusion" of the kidney and not from the definite recovery of the tubercular focus. So that the kidney which has been diseased may show a clear urine which does not contain pus nor Koch's bacilli and is not toxic for the cobra, and is almost as rich in extractive substances as that of the healthy kidney when as a matter of fact a part of its parenchyma is transformed into a closed cavity the walls of which contain tubercles in a latent state which may reawaken at any time and reinfect the bladder and destroy the organ which had been supposed to be cured. He reports two cases.

A woman of 45 had had bladder trouble and pyuria for two years. A hypogastric incision was made and an area of soft fungosities removed from around the left ureteral orifice. There was rapid recovery and complete disappearance of bladder symptoms. Histological examination and inoculation of the cobra showed that the fragment removed was tuberculous. Five years later the patient returned complaining of left lumbar pain. Nephrectomy showed the ureter normal. The upper two thirds of the kidney were also normal. The lower third was merely a sac with caseous contents and a fibrous wall completely closed without any communication with the pelvis or with the ureter. It is evident that five years before the tubercular focus communicated with the pelvis, since the area around the ureter had become tubercular.

At the time of or after the bladder operation the lower calyx was obliterated and the focus thus excluded whence disappearance of the pyuria and bacilluria. This case is related to those described by Ca per Pawlow and Key where there was a double ureter draining a kidney. A part of the kidney destroyed by tuberculosis was excluded by obliteration of the calyx of the corresponding ureter. But this case proves especially that the arguments for the spontaneous recovery of kidney tuberculosis with preservation of the function of the organ are not valid. Even if catheterization of the ureter of the supposedly recovered kidney gives a urine without bacilli or pus and not toxic for the cobra, it is not safe to conclude that the kidney is well. Therefore

nephrectomy is at present the only rational treatment for unilateral ulcerocaseous tuberculosis of the kidney. E. J. J. J.

Legueu F: Use of the Constant in Nephrectomy for Tuberculosis (Des applications de la constante à la néphrectomie). *J. d. M.* 1914 vi 1. *By Journal de Chirurgie*

Three points are to be considered in the application of the urosecretory constant in nephrectomy for renal tuberculosis: (1) its factors (2) its interpretation and (3) its clinical value.

1. The constant depends (a) on the functional disturbance which the tuberculosis itself has produced in the parenchyma of the kidney which it has attacked. As a general rule the constant rises in proportion to the amount of renal parenchyma destroyed by the tuberculosis. But it must be remembered that quite extensive tubercular lesions may exist in a kidney without its function being very much disturbed. (b) on the accompanying or consecutive nephritis of tubercular or other origin, in the other kidney—the constant rises in proportion to the degree of nephritis in the other kidney. (c) on the compensatory hypertrophy of the healthy portions of both kidneys.

2. The variations of the constant may be considered in renal tuberculosis. Legueu has observed as maxima and minima 0.90 and 0.05. Three possibilities are presented. (a) The constant is about 0.70. It is normal; the kidneys are functioning well. But the patient may present either perfectly healthy kidneys or a discrete bilateral renal tuberculosis or a unilateral tuberculosis with integrity of the other kidney which has made up, by compensatory hypertrophy for all that is lost by the diseased one. (b) A constant of 0.100 signifies that the patient has only one kidney or two halves of kidneys. The disease may be bilateral and partial or unilateral and total. It will require catheterization of the ureter to settle this question. (c) The constant is 0.150. Diagrammatically the patient has only one fourth of his kidneys but functionation may be divided so that operation is contra-indicated.

3. As to a clinical value when catheterization of the ureters is impossible the constant shows better than any other method the normal functioning of the other kidney and it allows the surgeon to avoid catheterizing the ureters through the opened bladder or performing an exploratory lumbar incision on the sound side. The constant does not settle the question of the localization of the lesions. This must be done by catheterization of the ureters, radiography, clinical examination and exploratory lumbar incision. J. TAYLOR.

McCauley B. W.: A New Method for Estimating the Functional Capacity of the Kidneys by Forced Elimination of Preformed Urea. *Med. Rec.* 1914 lxvii 507. *By Surg. Gynec. & Obst.*

The author considers as a formal and unsatisfactory the information given by the usual

Francols J. Incrusted Cystitis (La cystite incrustée) *J d rol* 1914 v 35

By Journal de Chirurgie

Incrusted cystitis is an ulcerative inflammation of the bladder wall with deposits of calcium phosphate on the surface and in the walls of the ulcer. It may appear in the course of acute cystitis but in the majority of cases (13 out of 16) it follows a long period of chronic cystitis—3 to 5 years. It presents the usual symptoms of cystitis and sometimes also débris of the incrustations are discharged or even true gravel. The urine has an ammoniacal odor and is generally alkaline. The capacity of the bladder is reduced and varies from 100 to 30 ccm. The concretions discharged are in the form of yellowish or brownish scales, rough on the surface adherent to the bladder smooth on the opposite side. Retention of urine and pyelonephritis are frequent complications.

The cystoscopic picture varies according to the thickness of the layer of incrustation. It may show simply yellowish non-elevated patches with irregular borders; it may give the impression of a thin layer of cotton on the mucous membrane or it may be thick and elevated resembling a tumor or a calculus and giving the impression of a white sponge in the bladder. These incrustations are multiple and distributed over the trigone, the fundus and the lower part of the bladder cavity. The surrounding mucous membrane is red, edematous, or even ulcerated.

The favorite location is the trigone, the region of the ureters or the neck; they may be localized on a hypertrophied prostatic lobe. Local necrosis of the mucous membrane is the first phenomenon, and the calcareous incrustation is secondary. It does not recover spontaneously. Curettage by the natural route or even after cystostomy often fails to prevent recurrence and should be replaced by excision of the plaques followed by suture.

J TAYLOR

Farnier. Treatment of Stubborn Cystitis by Iodine Fumigation (Le traitement des cystites rebelles par l'emploi de l'iode) *Arch rol* 1 d Necker 9 1 353

By Journal de Chirurgie

Farnier adds 9 cases to those already published in his thesis on this subject. He describes in detail the technique of his method by which he has now treated 3 cases of cystitis in which no improvement could be obtained by any of the usual methods of treatment.

The results obtained are as follows: 11 complete recoveries including 8 cases of acute cystitis of the bladder, 1 of acute cystitis in a prostatic case, 2 cases of tubercular cystitis after nephrectomy. Improvement was noted in 12 cases including 8 of tubercular cystitis, 1 of calculous cystitis, 1 of cancerous cystitis, 2 of cystitis of the base. Sedation was noted in 4 cases of tubercular cystitis. There were 4 unsuccessful cases including 1 case of chronic cystitis in a prostatic case, 1 of chronic

cystitis in a tabetic case, 1 chronic cystitis from an unknown cause and 1 tubercular cystitis. There was one case of temporary exaggeration in a slight cystitis of the neck. Iodine fumigation is infinitely less painful than the injection of phenolized glycine by Ronsius method, and it constitutes one more good method in the treatment of stubborn cystitis.

MATTHEW CREVASSU

Deavor T. L. Chronic Retention of the Urine: Twenty Eight Years of Catheterization *J Am M Ass* 1914, lxx 1012

By Surg. Gynec. & Obst.

The writer reports a case of continuous catheterization in a female extending over a period of twenty-eight years. At the age of fourteen having previously been perfectly well she was seized with severe hypogastric pains with inability to void. The attending physician finally resorted to catheterization which has been continued ever since although all other known methods were employed from time to time to relieve the condition without success. On her last admission to the hospital nothing in the past history physical or cystoscopic examinations could be found to account for the retention. There was a well-defined spasm of the internal meatus. The urine showed a mild chronic cystitis and the bladder held about 3 ounces. The natural desire to urinate had for years been replaced by severe suprapubic pain.

Because of the length of time the condition had existed operation was resorted to in order to give the bladder rest and a suprapubic cystostomy was done. The internal meatus was found small and tense and lacked the usual resiliency and the bladder wall was considerably thickened. After the suprapubic drain was removed a permanent catheter was tied in the urethra and as the suprapubic drainage subsided all the urine came through the catheter. This was allowed to go on for a week when the catheter was clamped off and the urine allowed to accumulate for one hour and then the bladder emptied. This time was gradually lengthened up to five hours when 12 ounces could be retained without discomfort. The original hypogastric pain gradually subsided and the usual desire to urinate returned. Next a smaller catheter was used and urine allowed to escape around it at stated times. Finally the catheter was discontinued altogether. The recovery was perfect.

C R O CROWLEY

Thérénat I. Attempts at Treatment of Retention of Urine without any Mechanical Obstacle (Essai de traitement des états de rétention d'urine sans obstacle mécanique) *Pos méd* 1913 xl 651

By J. mal de Chirurgie

Retention of urine without any obstacle or with out even senility is well known but it has been observed in young subjects due to a loss of contractile power of the bladder from some unknown cause. In such cases electrical treatment has been tried



section and even prostatectomy in cases where it has been supposed that the prostate might be the cause. Everything failed.

Le Fur had one successful case by creating a temporary suprapubic fistula. Rochet in two cases and Cathelin in one affected a cure by plication of the bladder after subperitoneal dissection by the suprapubic route. Since then Rochet had devised a new surgical operation which consists in surrounding the antero-lateral wall of the bladder with a muscular band formed from flaps of the recti of the abdomen, a band which aims to raise the bladder which has sunk down on its base and to constrict it by lateral compression, flattening it transversely.

Readers are referred to the original for details of the technique of the operation which has been performed only once with good immediate results but it has been too recent to permit judgment as to its permanent results.

### GENITAL ORGANS

Barney J. D.: Abscess of the Testicle. *Surg Gynec & Obst.* 1914. xvii. 204.

By Surg. Gynec. & Obst.

Barney says that abscess of the testicle, as distinguished from the epididymis is very rare. He reports three cases occurring in his own practice in which no primary focus could be found and where there was no general infection as a causative factor. Orchidectomy was done in all three. In one the bacillus mucosus capsulatus was found in pure culture, in another the colon bacillus. The epididymis was not actively involved in any case.

A pathological report of one specimen showed that the inflammatory process had extended by way of the interstitial tissue.

The author discusses infection of the epididymis and testis and is of the opinion that in the case of the latter organ there is evidence of a selective function as well as an excretory function. These together with its rich blood and lymph supply determine the incidence and nature of an infection. Certain organisms attack only the epididymis, others only the testicle while still others attack both organs. The theories of their transmission to the testicle by way of vas lymph and blood stream are discussed.

MacGowan G.: Conservative Surgery of the Testicle. *Surg Gynec & Obst.* 1914. xvii. 339.

By Surg. Gynec. & Obst.

Careless and wanton destruction of the essential genital organs in men and women has been very frequent in the past and remains unnecessarily frequent now, rare in men because males are more reluctant to submit to castration, but inspired by fear they will consent to mutilation.

The exercise of patience and skill in diagnosis, surgical ingenuity and anatomical knowledge would save many testicles.

Indurated and painless growth without traumatism should arouse suspicions of lues, a history of infection not always to be elicited—possibly late hereditary without the presence of the usual stigmata. If clearly syphilitic, and resolution under salvarsan or mercury does not occur, exploration for thick-walled hydroceles of the tunica or cord, their removal and the release of pressure caused by adhesions may be followed by speedy cure. MacGowan reports three cases of this character.

He concludes:

Conservative surgery is usually applicable to tuberculous testicles—tuberculosis is the infective disease that most frequently gets well. Protest should be made against castration in all but malignant cases of this disease or where the testicle is plainly the initial and only focus of infection. In tuberculosis of the testicle which commonly commences in the epididymis, epididymectomy is a conservative operation. A case is reported of double epididymectomy in which the power of copulation is preserved intact after five years. Resection of a tuberculous testicle may be successfully accomplished. A case is reported where sexual power was retained after removal of one testicle, both epididymis and half of the remaining testicle.

Conservative surgery as applied to traumatic destruction of a part of a testicle is discussed and a case is reported of the successful resection of more than one-half such an organ.

Knight G. P.: Epididymotomy with Report of Cases. *Am J Urol.* 9. 4. 38.

By Surg. Gynec. & Obst.

The author reports five operations for epididymitis. He used the Eckels technique with slight modifications. Where Eckels used a blunt probe or grooved director for puncturing, Knight employed a blunt pointed needle making from ten to twelve punctures. Eckels states that the preparation of the patient is the same as that for a general anesthetic as local anesthesia is not advisable. The writer has used local anesthesia for this operation in several of the cases which he reports, with absolute success, hearing no complaints of pain and noting no symptoms of shock. He admits there may be some pain if an orchitis is present as happened in one of his cases, but with careful handling of the testicle this symptom can be obviated. His conclusions are:

1. There is immediate abatement of all symptoms for which the patient seeks relief.

2. The tendency to relapse is nil.

3. The operative procedure is without danger as regards anesthesia because the general anesthetics can be eliminated.

4. This operation as compared with the older methods of treatment is one of utmost importance from an economic point of view, not only to the patient when loss of time from daily labor is considered, but also to the hospital, in that economic administration by greatly diminishing the number of days of treatment.

H. A. Moore

Wade H: Prostatism 1 5 g P'ta 1914 lx  
By S r Gyneec & Obst.

This article is long well written splendidly illustrated and has a good lithography. It goes minutely into a written and illustrated description of the normal and pathological anatomy of the prostate bladder and adjacent organs.

In discussing the pathology of simple hypertrophy the author expresses his belief that this may be due to some alteration in a normal internal secretion and also states that this hypertrophy practically always involves the middle lobe. He further remarks that the nature of the growth of the ejaculatory ducts together with the seminal vesicles are displaced downwards and backwards into a region of safety thereby favoring the ease with which a suprapubic operation can be done. As the overgrowth does not affect the posterior lobe this is compressed in such a way as to form a sort of false capsule to the prostate and the line of cleavage between it and the hypertrophied tissue is well marked.

Prostatic fibrosis depends upon at some length. In this connection the interglandular tissue is so increased in amount that the whole organ is more or less solidified a process which Wade compares to that of the kidney and other organs. The overgrowth of connective tissue leaves no false capsule although in between prostatic capsule and sheath being much more intimate than normal the removal of the organ by any method is rendered exceedingly difficult. When the middle lobe is especially involved the fibrosis is not easily proved.

Carcinoma occurred in one out of ten of Wade's cases of these. He had a chronic lobular prostatitis as well. Three types of carcinoma were found the intra-epithelial, the adenocarcinomatous. Wade says that cancer may begin in the center of an area of fibrosis of the prostate so that complete section of the whole organ may have to be made or it is removed.

He discusses the etiology of the disease and the cause of the unoperated cases. He points out the irregularities in the ducts of the prostate and the possibility of the greater the irregularities the greater the chance of the disease. He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease.

He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease. He says that the irregularities of the ducts are the result of the disease.

tatism due to other causes than advanced chronic lobular prostatitis.

The suprapubic transverse vesical method of prostatectomy by visual dissection offers the prospect of developing into a means of treating prostatism which will ultimately warrant its adoption in a large number of cases.

A prostatic carcinoma in an early case may be clinically indistinguishable from hypertrophy due to chronic lobular prostatitis. J D BARNEY

Beer E Adenoma of the Prostate Med Rec 1914  
1011 471 By Surg Gyneec & Obst

The author reports 93 cases from the genito-urinary service of Mt Sinai Hospital. Sixty were operated by the suprapubic route. To refused operation there were too high risks for prostatectomy and a half such slight symptoms that a prostatectomy did not seem a desirable.

The writer believes the growths to arise from the much discussed middle lobe in the region between the ejaculatory ducts. He discusses in detail the mechanism of obstruction showing that obstruction is due to a shutting off of the urethra by the prostate at the time of bladder contraction but that the urethra is patent when the bladder is not contracted.

The author names the following as indications for operation: (1) Attacks of retention (2) marked frequency of urination (3) bleeding (4) difficult and painful urination (5) chronic intractable cystitis.

The author believes in a very careful preliminary study of prostatic cases. He lays stress upon three things: (1) The anatomical and functional condition of the bladder (2) the condition of the heart and (3) the condition of the arteries.

He thinks that the functional test is still useful and emphasizes the following points:

It can be said with absolute truth that the nearer a patient comes to a condition in which he excretes a normal amount of urine the better. He says that the nearer a patient comes to a condition in which he excretes a normal amount of urine the better. He says that the nearer a patient comes to a condition in which he excretes a normal amount of urine the better.

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The author discusses the one and two stage operations. He believes in the one stage operation. He says that the one stage operation is the best. He says that the one stage operation is the best. He says that the one stage operation is the best.

He says that the one stage operation is the best. He says that the one stage operation is the best. He says that the one stage operation is the best. He says that the one stage operation is the best. He says that the one stage operation is the best.

He packs a long gauze pack into the bleeding region from which the prostate is taken with a heavy silk thread attached to the gauze pack and passed through the tube. For an anæsthetic the writer prefers ether preceded by gas.

Of his 5 cases, the first died from kidney infection the second had a fatty heart the third had an apoplectic stroke the fourth died twelve days after an operation for embolism the fifth patient died from a "blood crisis" in advanced myelogenous leukaemia.

Strychnine and caffeine are used as stimulants in the post-operative treatment. Saline is used per rectum. If much oozing is present the clots are washed out by a catheter introduced through a drainage tube. The packing is withdrawn in three or four days through a Kelly endoscope. Whenever drainage is not well controlled a receptacle of hard rubber is glued over the drainage hole to collect the urine.

These cases are irrigated each day through the urethra with a urethral tip and the urine is kept acid with urotropin. Closing of the fistula is usually easy and rapid.

The author lays stress on careful asepsis and prevention of infection. He says the end results of these operations are ideal. A. C. STOKES

Deaver J. B.: Suprapubic Versus Perineal Prostatectomy. *Ann. Surg.* Phila. 1914 LX 360.

By Surg. Gyneec. & Obst.

The author summarizes his article which embodies the results of his personal experience with prostatectomy with the following arguments in favor of the suprapubic route:

1. The approach to the prostate is simple and practically bloodless.

2. The enucleation of adenomatous growths is accomplished with ease.

3. The working field is large and under perfect control.

4. The prostate is accessible and can be made more so by digital pressure on its rectal surface and without the danger of injury to the bladder from the use of tractors necessary in the perineal operation.

5. The muscular control of the bladder is not disturbed since the internal sphincter may be avoided and the compressor urethra lies outside the line of cleavage. Incontinence is therefore less frequent following this technique.

6. Permanent fistulae are less frequent after the suprapubic operation. They never occur in fact if the urethra is bougied.

7. Stones can be more easily removed.

8. Sexual potency is maintained as frequently after the suprapubic operation as after the perineal, and the question of sterility is rarely of any consequence.

9. The mortality is in properly selected cases, no greater and the percentage of uncomplicated cures is larger.

In his preference for the suprapubic operation Deaver yields (1) in cases of carcinoma when lines of cleavage have been obliterated (2) in tuberculous of the prostate (3) in the small sclerotic prostates of chronic prostatitis or fibrous hypertrophy. He states that he operates rarely in these groups of cases and then only on the strongest indications, using the perineal technique of Young.

H. L. SANFORD

Grinenko, A. P.: Total Removal of the Prostate in the So-Called Hypertrophy of That Gland (Zur Frage der totalen Entfernung der Prostata bei der so-genannten Hypertrophie derselben). *Arch. f. kl. Ch.* 1914 CX 559.

By Journal de Chirurgie

The author made a minute macroscopical examination of 12 hypertrophied glands from cadavers and of 30 obtained by operation. Based on his observations he discusses the total removal of the gland and comes to the following conclusions:

1. The gland has no true capsule which separates it from the surrounding tissue.

2. By its capsule is understood the covering which is formed around it by the folds of the pelvic fascia.

3. A division of the prostate into lobes is unjustified from the anatomical standpoint.

4. The glandular tissue of the prostate is divided by the internal smooth sphincter into the central group of the penurethral glands and the peripheral group of the true glandular tissue of the prostate.

5. The musculature of the gland forms a continuation of the musculature of the prostatic part of the urethra.

6. The gland is very intimately connected with the surrounding tissue by its musculature.

7. In the so-called hypertrophy of the prostate adenomatous nodules develop in the smooth sphincter from the penurethral glands.

8. These adenomatous nodules are closely connected with the urethra and are arranged around it, in front of the ejaculatory ducts and above the colliculus seminalis.

9. The entire mass of these nodules which are covered with a kind of fibromuscular capsule can be enucleated from the gland through the bladder.

10. This nodular mass projecting into the bladder gives the impression of an adenoma from its clearly defined boundaries and relative independence.

11. In transvesical prostatectomy the penurethral adenoma is removed, the prostate itself remaining in place.

12. In this operation a part of the prostatic urethra is removed with the tumor while the ejaculatory ducts as a rule remain intact.

13. Histologically the complete removal of the prostate without injuring the covering of fascia is impossible.

14. The transvesical method of removing the tumor from the gland must be regarded as the only rational one. GLASS.

# SURGERY OF THE NOSE, THROAT, AND MOUTH

## NOSE

Pfingst A O A Case of Complete Bilateral Bony Occlusion of Both Nasal Choanæ *La laryngoscope* 19 4 xii 179

By Surg., Gynec. & Obst.

The author reports a case of a telephone operator aged 24 who complained of inability to breathe through the nose undeveloped sense of smell hearing normal and good general health until within two years since which time she has suffered with daily dull frontal headache Upon removal of considerable mucus from the nose by suction he found a hypertrophic rhinitis the septum slightly deflected to the right and a probe passed through either meatus met a hard firm obstruction far back

The post rhinoscopic examination revealed a septum slightly convex, appearing to have a general direction downward and forward completely closing the lumina of both choanæ The margins of the choanæ were well defined and the vomer projected slightly beyond the septæ in the median line To the finger the septum gave the impression of being bony After cocainizing the septæ the author removed a button of bone from the right side with a hand trephine but on account of pain the patient refused further operation and passed from observation the next day

Eight years later the patient reported that since the operation she had been able to blow through the right nostril

Atresia of the choanæ is mostly congenital bilateral or unilateral osseous membranous or both and is best treated by making several small holes in the septum with the electric drill and punching out the bone between to make a large opening extending to the nasal septum thus preventing reclosure

ELLEN J PATTERSON

Dighton A The Submucous Resection of the Nasal Septum *Cl J* 9 4 xiii 4

By Surg. Gynec. & Obst.

The author considers the operation indicated in case of any deflection which causes interference to the natural ventilation and drainage of the nose nasal sinuses or ear but contra indicated in children under fifteen years of age and in all cases of active syphilis

In operating the author considers general anæsthesia unobjectionable and the initial incision as the most important step in the operation this should be made to the plane between the perichondrium and the cartilage

ELLEN J PATTERSON

## THROAT

Davis, J. L.: Fixed Sources of All Hæmorrhage from Tonsillectomy and Its Absolute Control *Laryngoscope* 19 4 xiv 161

By Surg., Gynec. & Obst.

The author states that while numerous arterial branches reach the tissues which enter into the formation of the tonsillar fossa a single artery enters the fossa at its superior extremity passes downward between the capsule and the muscular aponeurosis penetrating the capsule to reach the tonsil

Accompanying the artery are two veins, one running upward to join the palatine plexus and one running downward to reach the pharyngeal plexus

Thus in the average case one artery and two veins are the principal vessels severed and since the venous oozing is of temporary duration there remains but the one artery to be dealt with in the control of hæmorrhage

The author controls hæmorrhage by retracting the superior margin of anterior pillar grasping the artery carefully to avoid injuring the wall of the fossa and tying a ligature of No 1 catgut about the vessel

ELLEN J PATTERSON

Vanderhoof D A. Technique and Results of Injections of Alcohol for Pain in Tubercular Laryngitis. *Ill Ill M J* 1914 xiv 139

By Surg. Gynec. & Obst.

From his experience in relieving pain in late tuberculous ulcerations the author advocates early blocking of the nerve in those cases where the ulcerated condition is in that part of the throat innervated by the internal branch of the superior laryngeal nerve

If he uses for the injection a warm 50 per cent solution of alcohol with a record 2 ccm syringe the needle of which is filed across and blunted so as to avoid the danger of injuring the superior laryngeal artery which lies in close proximity to the nerve

The operation is done under aseptic conditions with the patient in the recumbent position The skin is sterilized with iodine the nerve located 3 cm from the incisura thyroidea then with the skin between the thumb and forefinger the needle is inserted with a slow pushing and twisting movement 1½ cm perpendicular to the skin and the point slowly moved about until the patient complains of a sharp pain in the ear or jaw at which point the alcohol is slowly injected the needle being moved about so that five minutes is consumed in the injection of the 2 ccm. Upon the withdrawal of the needle a collodion dressing completes the operation.

ELLEN J PATTERSON

**Bérard L. and Sargnon** Two Cases of Laryngopharyngectomy for Cancer (A propos de deux cas de laryngo-pharyngectomie pour cancer) *Lyon ch* 1913 x No 6 By Journal de Chirurgie

The simultaneous removal of the larynx and all or a part of the pharynx is indicated in intrinsic cancer of the larynx which has extended secondarily to the retro arytenoid region and the pharynx in extrinsic cancer behind the arytenoids or near the pharyngolaryngeal boundary and in certain primary cancers of the lower pharynx which have not yet clinically invaded the larynx but in which extensive operation demands the sacrifice of this organ. Some surgeons (MacLeod, Korte, Gluck) have also performed laryngopharyngectomy for tuberculosis but Bérard and Sargnon think that malignant tumors are the only justification for the operation.

It is generally possible to preserve the posterior wall of the pharynx in the form of a band of mucous membrane of varying width the edges of which can be united by flaps of skin buried in the wound. In place of the organs removed a trough of skin and mucous membrane is formed opening forward. The operation may be performed in one stage without a preliminary tracheotomy or in two stages. In the latter case a tracheotomy is performed 15 or 20 days before the principal operation. Bérard and Sargnon recommend low transverse tracheotomy which is a little more difficult to perform than the classical tracheotomy but which gives no trouble in the later operation and insures a very firm fixation of the trachea, preventing it from retracting and causing mediastinitis. If recurrence does not take place quickly the pharyngeal trough is closed secondarily by a plastic operation by means of skin flaps taken from the neighboring regions; this operation is delicate and not always completely successful. *Stulze* persists sometimes.

In their cases Bérard and Sargnon used the two-stage operation. In one case they used local anesthesia with novocaine in the other the same anesthetic combined with a very slight general anesthesia by Billroth's method. In both cases the low transverse tracheotomy was performed under only novocaine anesthesia. The two patients who both had extrinsic cancers of the larynx bore the operation well but one died of recurrence after four months before the plastic operation could be performed. In the second case the complementary

operation which was performed two and a half months after the laryngopharyngectomy was a partial failure and another operation was necessary to make the closure complete.

Laryngopharyngectomy is an operation of considerable gravity but perhaps not greater than that of simple laryngectomy. Gluck and Sargnon published statistics of their own 74 cases with 19 deaths, 25 per cent. In the last 14 operated on they did not lose a single patient. Bérard and Sargnon add a report of 32 cases from different authors, with 6 deaths 19 per cent and 7 rapid recurrences.

CH. LEBLANC

## MOUTH

**Massia G and Therre A:** Peridental Cysts and Tuberculosis (*Kystes paradentaires et tuberculose*) *Lyon ch* 1914 xi 68

By Journal de Chirurgie.

The pathological anatomy of these cysts is well known and it is universally admitted that they originate in the epithelial debris near the apex of the tooth. But the cause of their development is almost entirely unknown; it is generally supposed that the epithelial proliferation is caused by the irritation resulting from dental caries. Massia and Therre's case shows that a specific infection such as tuberculosis may be a factor in the pathogenesis of these cysts.

In a man of 35 who had tubercular lesions of the apices of both lungs and most of whose teeth were carious these authors found a cyst as large as a small pea at the root of the first upper premolar. The histological examination of this cyst showed typical tubercular follicles with giant-cells and unfortunately bacteriological proof was not furnished as bacilli were not found in the sections and in oculation was not practiced. This is not a unique case. Euler published a similar case with the presence of tubercular follicles and Koch's bacilli in the walls of the cyst, and more recently Zils reported 4 cases of cyst of the root of the tooth with positive inoculation in the cobra. Therefore tuberculosis must be admitted as an etiological factor in these neoplasms. Generally the infection takes place through a carious tooth but Massia and Therre admit the possibility of infection through the blood stream.

CH. LEBLANC

# ABSTRACTS OF SOCIETY PAPERS

## AMERICAN GYNECOLOGICAL SOCIETY

MEETING HELD AT BOSTON MAY 19-21 1914

Henderson Y Recent Experiments Defining the  
Dangers of Anæsthesia *T Am Gy & Soc*  
Boston 1914 M y By Surg Gynec & Obst

The great advances recently made in anæsthesia have replaced vague conceptions with precise knowledge of how fatalities are produced. They are found to be rarely due to excess of anæsthetic but rather to incomplete anæsthesia.

Thus Lereb has shown that with excess of chloroform respiration always fails before the heart but that in lightly chloroformed men and animals excitement, adrenalin or sensory stimulation produce delirium cordis.

Under light etherization the heart is peculiarly susceptible to asphyxia. Partial asphyxiation is not uncommon even with a so called open method. A simple closed method such as the Roving mask and bag may keep the patient a better color (a true index of oxygen supply) than an open method because less ether is blown away by stormy breathing and the patient gets a vapor of adequate strength.

Ether should be used as a gas i. e. vaporized before being brought to the patient. Boothby has shown that there is really no difference in the amount needed by refractory or difficult subjects and others. Experiments by the author show that the ill effects of ether depend largely on the excitement of respiration that different grades of ether differ markedly in this respect. Ether deteriorates when exposed to light air and water and becomes non-exciting.

Experiments on men and animals show that ether excitement is always followed by subnormal breathing, cyanosis and partial asphyxia with deleterious effects on the patient. The natural methods of prevention are to use ether as a gas to prevent excessive loss of  $CO_2$  and to administer small amounts of  $CO_2$  as a respiratory stimulant after the anæsthetic is withdrawn.

Smith R. R. The Behavior of the Abdominal Cutaneous Reflexes in Acute Conditions within the Abdomen *T Am Gynec Soc* Boston, 94  
M y By Surg Gynec & Obst

The behavior of this reflex has been noted in 75 cases in which diseased processes existed within the abdomen. The greater part of these were acute. The results have been compared with the findings at operation which followed. This reflex and its

behavior has been a test frequently used by neurologists and attention has been called to it in local conditions within the abdomen by several writers. The reflex is obtained by stroking the skin of the abdomen which normally produces an almost simultaneous contraction of the rectus and oblique muscles on the corresponding side. It is common to distinguish four reflexes—two above and two below. The reflex is very constant in healthy young people though uncertain in very young infants and in old people or those with very relaxed or very obese abdominal walls. In the acute inflammatory diseases within the abdomen it is common to find this reflex involved to a greater or less extent and the test may be made use of in the diagnosis and in estimating the extent of the lesion.

Smith has found that in 75 cases of acute appendicitis the reflex was more or less involved in 65. It is sometimes involved even where rigidity is absent or uncertain. The reflex was commonly impaired only over the seat of the lesion when circumscribed though in these and more extensive processes the other reflexes were also frequently weakened or lost. It is commonly thought by no means uniformly involved in ectopic pregnancy. Its normal presence in cases of bowel obstruction would help to eliminate any acute infectious condition and in the subacute infections of the pelvis he found the lower reflexes almost uniformly absent. He believes that although the test has a limited value, it may be of distinct advantage to the surgeon and it is well worth his careful study.

Gatch W. D.: The Effect of Laparotomy upon the Circulation *T Am Gy Soc* Boston, 1914  
M y By Surg Gynec & Obst

Operations upon the abdomen are very liable to be followed by disturbances of a more or less grave character of the general circulation because of the large amount of blood contained in the abdominal viscera. This is from 35 to 40 per cent of all the blood in the body. The circulation through the abdomen depends primarily upon the action of the heart though the negative pressure in the thorax and the movements of the abdominal walls may assist the flow somewhat. The pressure in the vena cava inferior is the same as the intra-abdominal pressure. When the latter is increased by ascites or tumors the pressure in the veins increases to an equal degree. The maintenance of this venous

3 Where there has been a laceration through the rectovaginal sheet and levator ani muscle perhaps including the anal fascia, with consequent rectocele or rectal prolapse

Not only must the type of prolapse be ascertained but the size of the uterine body, the amount of infravaginal or supravaginal hypertrophy of the cervix, the extent of the vaginal eversion, the degree of cystocele and rectocele, the amount of edema and the general condition of the vaginal walls, the presence or absence of adhesions, adnexal tumors, the degree of visceral ptosis and intra-abdominal pressure are to be considered. Furthermore every woman with pelvic prolapse should be examined in the standing posture.

Primarily the causes of failure have been

1 Errors in judgment in the selection of cases for this procedure

2 Errors in technique

3 Atrophic tissue changes in the reconstructed supporting structures

4 Unrelieved intra-abdominal pressure acting in conjunction with an abnormally large pelvis or in a pelvis of faulty inclination

Admitting that 82 cases is too small a number from which to draw any general deductions the author offers the following conclusions

1 Interposition operations should be limited to women at or past the menopause with relatively small uteri and that when the procedure is elected in those still menstruating sterilization by tubal ligation should be done at the time of the operation

2 Cases of prolapse in which the sliding takes place in the post-pubic cleavage plane are not corrected by the interposition operation

3 The morbidity is wholly due to technical defects, such as improper preparation, imperfect hemostasis, bladder injury with its consequent vesical disturbances

4 In anteverting the uterus, the anterior wall of the uterus should rest on the fascial plate just behind the pubis. The fundus should not be brought under the arch as excessive anterior displacement not only favors recurrence but anteфлекs the uterus and interferes with drainage

5 The curettings from uteri about to be transposed should always be examined as degeneration may occur

6 Hysterectomy if subsequently necessary is easy after this operation

7 Incidentally dyspareunia is a constant and troublesome complaint HARVEY B. MINTZ

Ryford II T: An Internal Alexander Operation  
T. Am Gynec Soc Boston 194 May

By Surg Gynec & Obst

The author considers the Alexander operation the most satisfactory for replaceable retroversion due to relaxation of the pelvic tissues. If lacerations about the vaginal entrance are present they are also repaired. Operations upon the sacro-uterine ligaments are not advocated in ordinary

cases because according to the experience of the author these ligaments will gradually grow shorter after an Alexander operation if a small sized pessary is worn for a few months to protect them from overstretching.

When a median abdominal incision has to be made for pelvic conditions the ligaments are shortened through that incision in such a way that they draw toward the internal inguinal rings as in the Alexander operation and in such a way that the sutures are extraperitoneal. A fold is taken in each ligament and sutured. These folds are drawn through a peritoneal puncture near the internal ring and attached along the inner surface of the abdominal wall at this point but extraperitoneally. This is easily accomplished after separating the peritoneum from the abdominal wall on either side as far as the internal ring.

Stone I S: The Technique of Supravaginal Hysterectomy Since the Introduction of Iodine as a Sterilizing Agent  
T. Am Gynec Soc Boston 194 May  
By Surg Gynec & Obst

The literature of this subject has not been profuse since the mortality of hysterectomy reached about 5 per cent in the hands of most operators, and the very low rate of 1 per cent in a few clinics. It is not surprising that a certain amount of trauma and shock should result from the removal of a large tumor which may have been enucleated from the broad ligament and which carries with it the uterus itself. This result of operation is not the only very important consideration. If there be blood or serous collections about the stump under the bladder reflexure or peritoneum—a much more frequent occurrence than many suppose—it is very important to avoid even the slightest infection of the wound area especially in depleted and shocked patients.

After the usual careful study of each case presented for the operation the method used by the author is substantially as follows. The skin can be sufficiently sterilized by one application of a diluted tincture of iodine but the soap and water cleansing the day previous to operation is still used. In one clinic the benzene iodine solution is used the day previous but in the other it is omitted in applications of a 5 per cent dilution 1 part to 3 of 95 alcohol being relied upon. One of these solutions is made before the patient takes the anesthetic the next applied just as the sheet and towels are placed. The first application is made ten minutes before the second and the latter is made to neutralize any bacteria which may have reached the surface during the excitement stage of anesthesia. There must indeed be great nicety of technique if an attempt is made to exclude the minute particles of iodine from the wound where some writers and teachers appear to dread it and it also seems to be equally impossible to say that two scalpels are better and safer than one while making the incision. If the first scalpel used in opening the skin carries

bacteria with it the second scalp will surely carry them further

Although much has been read and heard of the absence of bacteria within the uterine and cervical canal, and that cultures will not show a growth if taken from the vicinity of the internal os nevertheless all of the bacteriologists say that bacteria are found within the external os and it would appear to be at least prudent to render the entire uterine canal and also the vagina quite sterile in order that the operation may be done through a sterile field whether a total or a subtotal hysterectomy

The use of iodine within the uterus has many advantages but in the author's clinic the fluid — 25 per cent of the tincture — is not thrown into the uterus with such force as has been recommended when the tubes are injected as there may be a disadvantage in an unnecessary use of a toxic agent

Finally as one of the essential factors in the prevention of morbidity at this clinic they are using a combination of local with general anesthesia. Novocaine in 1:400 solution is freely used with ether or if the patient appears to require it nitrous oxide-oxygen is used. Before the wound is closed the urea and quinine solution is used above each pedicle and in the cervix itself in order to prevent the after pain. In addition to this morphia or heroin is often used to prevent shock or great restlessness

The result of this technique appears to be nearly perfect if the elimination of morbidity may be said to indicate such a desirable consummation. In charts — exhibited by lantern slides — the author shows a composite temperature range of most of their supravaginal hysterectomies since using iodine in the manner above noted. One special chart shows a case of ether pneumonia which recovered easily. Another by comparison shows an infection which occurred in a patient whose cervix could not be reached for injection. The result was a typical infection under the flap. A third shows nothing except that the patient had a hematoma which was not infected

Frank R. T. The Clinical Manifestations of Diseases of the Glands of Internal Secretion in Gynecological and Obstetrical Patients  
Tr. Am. Gynec. & Obst. Soc. Boston 1914 May

By Surg. Gynec. & Obst.

The aim of the author is to point out means of standardizing research both clinical and pathological by improved diagnosis and careful study of cases

The glands of internal secretion fall into three groups: (1) thymus gland and adrenal cortex may stimulate the sexual tract; (2) hypophysis and thyroid eventually cause hypoplasia; (3) the pancreas and parathyroids appear to play no rôle

The gonads or sex glands in turn react upon the other ductless glands producing indirectly important changes in growth, nervous system, etc. The gonad governs the growth of the external and internal

genitals directly and indirectly the development of the secondary sex characters — hair, fat, breasts, pelvis, larynx, psycho, etc.

The human ovary is a compound organ composed of follicle apparatus, corpus luteum, and perhaps the interstitial gland of atretic follicles

A description of the formation of each of these constituents follows. Ovulation apparently takes place from 1 to 14 days after the onset of the menstrual flow, the best time for impregnation being immediately after menstruation ceases

Physiologically the follicle apparatus controls the gradual pre-puberty growth of the genitals — perhaps assisted by the interstitial gland. The corpus luteum produces the cyclical changes. In pregnancy the products of conception cause a persistence of the corpus luteum and the yellow body prevents further ovulation and provides for nidation

The anatomical changes noted in hyperfunctional and hypofunctional conditions of the genitals are then discussed

Clinically only two types appear — the hypofunctional and hyperfunctional. Hypofunction locally is shown by aplastic genitals, amenorrhoea, dysmenorrhoea, and sterility. Systemically in infantilism, eunuchoidism, changes in the secondary sex characters, etc., appear in almost every case. Hyperfunction may cause no local change, symptomatically menorrhagia or metrorrhagia, and sometimes overfertility accompany this change. Systemically the changes are not marked

The diagnosis must include not only the local condition with examination of mucosa, uterus, and ovaries when removed, but also a functional examination of the thyroid, hypophysis, adrenal, etc. This may require blood examinations, X-ray tests of sugar, and adrenalin tolerance, effect of atropine and pilocarpine, etc., before during and after treatment

In treatment organotherapy has proved disappointing. Ovary therapy may be useful for the vasomotor symptoms resulting from castration. Thyroid at times helps in the amenorrhoea of obesity in early vomiting of pregnancy; it is of great value. Hypophysis extract has been little tried; the pituitary effect is purely a drug one

X-ray is of value in functional hemorrhages of puberty, adult, and premenstrual type; if malignant changes can be excluded. Resection of the ovaries for dysmenorrhoea, sterility, or irregular bleedings is justified only if the abdomen is opened for a more serious cause. Transplantation of the ovary fails to give permanent results. Local uterine treatment is of little value. Systemic hygienic measures are still the best at our disposal

Gellhorn G. Spinal Anesthesia in Gynecology  
Tr. Am. Gynec. Soc. Boston 1914 May

By Surg. Gynec. & Obst.

The safety of an operation stands in direct proportion to the amount of ether inhaled. The



popular ether drop-method is not as safe a procedure as would appear from existing statistics. The latter are incomplete in regard to the number of fatalities and do not take into consideration late complications which may either lead to death or seriously interfere with convalescence. There should not be any one routine method but the needs of the individual case must govern the choice of the mode of anesthesia. In gynecological work spinal anesthesia offers particular advantages and shows most impressive results.

The mortality rate from spinal anesthesia cannot be determined by statistics. These too are unreliable. The majority of deaths occurred during the experimental stages of the method. The anesthetic itself seems to have nothing to do with the mortality. Stovaine, tropococaine and novocaine are more or less equivalent; the author's experience is limited to the last-named drug.

The safety of spinal anesthesia depends first and foremost upon its accurate technique and the strictest observance of every minutest detail is of paramount importance. Reports of death must therefore contain all details of the technique employed before they can be admitted to serious consideration. It has been proven in thousands of cases that by a painstaking technique not only death but also collapse and other alarming complications of earlier days can be avoided successfully.

Contrary to the popular belief there is no psychic trauma connected with spinal anesthesia. Nausea and vomiting during operation are reduced to a minimum or are altogether absent. The abdominal walls are fully relaxed and the intestines remain quietly within the peritoneal cavity. Therefore all operative manipulations are rendered easier and the brusque handling of the viscera is obviated. All this tends to lessen the operative shock, and as nerve impulses do not reach the brain spinal anesthesia is the ideal measure of anoci association. In a certain small percentage analgesia is incomplete then a few whiffs of ether suffice to render the operation painless.

The author in a list of 127 abdominal and 43 vaginal operations shows that all kinds of gynecological operations including those on the kidney can be performed under spinal anesthesia. There has been no death from the method. In all four patients who died two of these from sepsis after radical operations for cancer of the cervix.

The post-operative care of spinal cases is strikingly easy. The usual post-operative symptoms appear in greatly mitigated form or are altogether absent. Patients who have had personal experience with ether and spinal anesthesia declare themselves in favor of the latter. An annoying and comparatively frequent by-effect is headache which however yields spontaneously or to bromides and constitutes no danger to the patient. Other by-effects such as backache, paresthesia and temporary paralysis seem to have become less frequent with improvements in technique and it is the con-

sensus of all observers that lasting ill effects are conspicuously absent. Spinal anesthesia markedly lessens the blood pressure and should therefore be used with caution in cases of pronounced hypotension. Icteronuria occurs after spinal anesthesia as well as after inhalation narcosis but exerts no deleterious effect upon the patient; it disappears spontaneously about five days after operation.

Spinal anesthesia enables the operation to be carried on with safety on patients in whom ether would be contra-indicated. It is thus chiefly applicable in cases where the seriousness of the affection, the magnitude of the operation, or co-existing complications—cardiac and pulmonary lesions, nephritis, diabetes, hyperthyroidism, advanced age, debility—constitute a particular risk. Minor operations should be reserved for ether narcosis. Spinal anesthesia is contra-indicated in kyphoscoliosis and other marked anomalies of the spinal column, diseases of the central nervous system, profound shock or marked hypotension from other causes, sepsis and fevers of unknown origin, furthermore in neuropathic individuals and where there is a strong prejudice against the method. Suppurations and eruptions near the desired site of injection forbid the use of spinal anesthesia until aseptic conditions can be established.

Peterson R. A Critical Review of Five Hundred Published and Unpublished Cases of Abdominal Cesarean Section for Eclampsia. *Tr. A. Gynec. Soc. Boston*, 1914, 117.

By Surg. Gynec. & Obst.

Since the 300 cases of abdominal cesarean section represent the work of 130 operators they are a very fair index to the present status of the operation as a method of treating antepartum eclampsia. Also since the results of operative obstetrics especially abdominal cesarean section are far better at the present time than formerly the value of the operation as a method of treatment of eclampsia can only be judged by grouping the cases chronologically.

Between 1908 and 1913 there were 83 cases of eclampsia treated by abdominal cesarean section with 73 deaths or a maternal mortality of 85.79 per cent. Up to 1908 there were 198 cases with 95 deaths or a mortality of 47.97 per cent. Hence the maternal mortality in the five-year period has been reduced nearly one half.

The old figures of a 40 to 50 per cent maternal mortality from abdominal cesarean section for eclampsia are incorrect and should no longer be quoted.

The mortality percentage quoted above 85.9 can be considerably lowered by care in technique and avoiding the use of the suprapubic route when there is great probability that the woman has been infected from below.

Nearly one-fifth of the entire series of operations, were performed by thirteen men having five or more cases to their credit with 17 deaths, or a maternal mortality of 18.65 per cent. Deducting 13 cases

where the proportion of moribund and septic patients was very high the remaining 76 cases with 10 deaths gave a maternal mortality of 13.15 per cent.

Although an eclamptic may die after a single or survive after many convulsions, the latter must be utilized as an indication of the degree of eclamptic poisoning until a better method has been found of estimating the patient's condition.

Emptying of the uterus either spontaneously or by artificial means while it puts a stop to the further elaboration of toxins from the foetus the placenta or both may not be sufficient to prevent further convulsions or in certain cases death of the mother from intoxication. In other words so great has been the effect of the poison that convulsions continue after delivery or death ensues in spite of the relief afforded by emptying the uterus.

In the present series convulsions ceased after abdominal cesarean section in 251 out of 457 cases or in 54.92 per cent. These statistics agree with those made up from those obtained from thousands of cases of eclampsia showing that convulsions cease after the emptying of the uterus either spontaneously or artificially in from 52 to 62 per cent of the cases.

Even when the convulsions cease after delivery a certain proportion of the patients die. In 126 cases where the convulsions ceased after abdominal cesarean section during the five-year period (1908-1913) there were 41 deaths or a maternal mortality of 19.8 per cent.

While the above percentage of patients died after emptying the uterus by abdominal cesarean section after cessation of the convulsions the mortality is much less than where the convulsions continue since in 130 of such cases there were 41 deaths or a maternal mortality of 31.53 per cent.

The operative treatment of eclampsia has never been given a fair trial. For this the uterus should be emptied quickly as soon as possible after the onset of the first convulsion not emptied after all kinds of medicinal treatment have been tried and failed.

In the present series there were 25 deaths after 124 operations performed after one to five convulsions or a maternal mortality of 20.16 per cent.

The best results in the operative treatment of eclampsia are bound to follow immediate emptying of the uterus in cases where the woman has not been infected by frequent vaginal examinations or attempts at delivery from below. This is shown by the following:

In 60 of the 14 cases where the operations were performed after from one to five convulsions where none or only one or two vaginal examinations had been made and where no attempts were made to deliver from below there were only 9 deaths or a maternal mortality of 15 per cent.

The increase in mortality due to delay is shown by a mortality of 10.31 per cent where the operations were performed after the sixth convulsion. This is 10 per cent higher than after quick delivery and five

per cent higher than the total mortality resulting during this same period (1908-1913).

In 60 cases where the convulsions ceased after operations performed after from one to five convulsions there were 8 deaths or a maternal mortality of 13.33 per cent. The mortality is twice as high 26.92 per cent after operations performed under the same conditions except that the convulsions continued.

When the abdominal cesarean sections were performed after more than five convulsions there was a resulting mortality of 26.31 per cent where there was cessation of the convulsions and 36.36 per cent where they continued.

The average number of convulsions in 386 cases of eclampsia in the abdominal cesarean series was 9 where the cases were not grouped. The average was 10 up to 1908 and 8 from 1908-1913.

Twins occurred 22 times in 500 cases of abdominal cesarean section for eclampsia or in 4.02 per cent of the cases. This is over three times as frequent as are twins in normal cases.

Excluding premature children and counting all children as living who survived one hour after delivery there were 9 deaths from 1908 to 1913 where 248 children were delivered by abdominal cesarean section or a foetal mortality of 3.62 per cent. Under the same conditions the foetal mortality was 10.60 per cent if children dying the first three days after delivery were counted among the deaths. Even estimating the foetal mortality by this method, it is much better than by any other method of treating eclampsia.

The foetus as well as the mother is affected by the eclamptic poison. The greater the number of the eclamptic convulsions before the delivery the greater the foetal mortality. Hence for the sake of the foetus the uterus should be emptied as soon as possible after the first convulsion. If other factors in the case call for abdominal cesarean section the chances of the foetus will be much better than if another method of delivery be employed.

In 474 cases of eclampsia in the present series 83.75 per cent were primiparae and 16.25 per cent multiparae. The relatively larger proportion of primiparae was due to the fact that primiparous convulsions such as undilated and rigid cervix and rigidity of the soft parts more often called for the abdominal operation than for other methods of delivery.

The maternal mortality is higher after abdominal cesarean section in multiparous women than in the case with primiparous eclamptics. In the present series in 225 primiparae the maternal mortality was 24.44 per cent while in 48 multiparae the mortality was 27.08 per cent.

The foetal as well as the maternal mortality is higher in multiparae after abdominal cesarean section. This is probably due to the greater degree of intoxication among the multiparae since in both primiparae and multiparae the children, because of the nature of the operation employed escape the

popular ether drop-method is not as safe a procedure as would appear from existing statistics. The latter are incomplete in regard to the number of fatalities and do not take into consideration late complications which may either lead to death or seriously interfere with convalescence. There should not be any one routine method but the needs of the individual case must govern the choice of the mode of anesthesia. In gynecological work spinal anesthesia offers particular advantages and shows most impressive results.

The mortality rate from spinal anesthesia cannot be determined by statistics. These too are unreliable. The majority of deaths occurred during the experimental stages of the method. The anesthetic itself seems to have nothing to do with the mortality. Scovaine, tropococaine and novocaine are more or less equivalent; the author's experience is limited to the last named drug.

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Nearly one fifth of the entire series, 91 operations were performed by thirteen men having five or more cases to their credit with 17 deaths or a maternal mortality of 8.68 per cent. Deducting 15 cases

pubically and transurethrally many times and proposes a simple treatment of injection of Bulgarian bacilli directly into the bladder in such cases.

The patient was a young woman who since the birth of her last child four years previous had had a terrific cystitis with a constant profuse hæmaturia accompanied by the passage of many bits of calcareous material. She suffered for several years an increased frequency of urination amounting to every fifteen minutes day and night. There was also great pain on urination considerable loss of weight and marked anæmia. She had had an operation two years before supposedly for tumor of the bladder done by a surgeon in a small town but was not relieved by the operation.

The patient appeared at the Washington University Hospital May 1913 suffering from the symptoms described above. Her general examination was negative except for the anæmia and loss of weight heart and lungs negative abdominal examination negative urine bloody and alkaline. Cystoscopic examination showed the bladder capacity to be 150 ccm. The cystoscope showed a general intense acute cystitis. Over the trigone and bladder base were seven irregular projections covered with a silvery white deposit with irregular surfaces which were downy. They were fixed to the bladder wall and only the superficial downy part could be moved about. Around the base of the tumor was an intense hyperæmia with bleeding spots. There was an annular band of the incrustated material around the internal orifice of the bladder neither ureteral orifice was visible. The urine was negative for tubercle bacilli.

It was thought that the disease was incrustated bladder tumor. Repeated local treatments with many high frequency sparks produced no improvement. A specimen of the tumor like mass removed with an operating cystoscope and examined pathologically showed it to be composed of two zones: an upper zone of necrotic tissue in which were imbedded masses of calcareous material beneath this was a zone of granulation tissue. The squamous epithelium of the bladder persisted in places and there were several villous like masses present. The diagnosis was chronic ulcerative cystitis with calcareous deposits.

Suprapubic cystotomy was performed. The bladder was thoroughly curetted and the tumors excised with knife and scissors and the whole interior of the bladder treated with high frequency sparks. The opening was closed catheter drainage being done through the urethra. Within two weeks the cystoscope showed the identical picture as before. A recurrence of the tumor like masses and incrustations. The patient was then curetted through the urethra many times and a few days after each curettage the same picture had recurred. Examination of the material showed it to be composed of calcium phosphate triple phosphates and ammonium urate. Urine was highly alkaline with a proteus infection. A treatment was given of

boric acid irrigations acid sodium phosphate and urotropine in large doses. The attempt was then made to change the chemical reaction of the urine by putting acid directly into the bladder. It was thought that acids themselves gave no effect on account of the frequent evacuations of the bladder. The author then injected Bulgarian bacilli with the hope of having some remain in the bladder between the urinary acts to grow and to kill off the original inhabitants. This was very quickly accomplished. Within forty-eight hours the patient showed improvement. She was given daily injections of three tablets containing six thousand bacteria each every other day for ten days. Within forty-eight hours she began to pass off large quantities of this calcareous material.

Six days after the institution of the treatment cystoscopic examination showed instead of the incrustation and tumor masses multiple ulcers. At this time the ureteral orifices could be easily seen and catheterized there was no renal infection. Ten days after the first treatment the patient's urine was highly acid but cloudy and she was able to sleep five hours at night. At this time one bichloride irrigation was sufficient to kill off the Bulgarian growth and the urine became clear still remaining acid and has continued so up to the present time over two months since the first treatment. There is at present no vestige of previous trouble within the bladder. The urine is clear and sparkling. The patient has gained a great deal in weight and is having absolutely no urinary distress.

The author takes up various phases of incrustated alkaline cystitis giving the various theories arriving at no definite conclusions as to the pathogenesis but remarks that the combination of infection, necrosis and supersaturation seem the most important factors. He gives a description of the two main types of incrustated cystitis namely the flat and the tumor like showing that the lesion is most commonly located on the trigone and internal orifice associated with a general acute cystitis with marked hemorrhage. The most distinguishing pathological characteristic is its marked tendency to recur. He states that there is nothing important in the symptomatology except that the symptoms exemplify an intense cystitis and are characterized by the passage of stony material.

The important diagnostic points are that the tumor masses do not show villi that the downy material which covers them is quite superficial ureter catheters being able to lift up only small whitish leaflets. Removal with an operative cystoscope gives the most accurate means for diagnosis showing the intense inflammatory process with infiltration of salts. Another diagnostic point is the intense edema extending along the urethra and at the meatus. The most important diagnostic point is what Caulk calls a therapeutic test which consists in acidifying the urine, causing rapid excretion of the tumor masses, demonstrating the remaining ulcers, quieting down the cystitis so that

traumatism of labor The greater intoxication among the multipara is probably due to their being on the average older than the primipara the average of the former in 77 cases being 32.6 years while the average age of the latter in 397 cases was 24.6 years.

The maternal mortality in eclampsia after abdominal cesarean section steadily increases with the age of the patients it being 23.63 per cent between the ages of 16 and 20 and 31.11 per cent between the ages of 31 and 35.

The number of eclamptic cases in the present series steadily increased from the fifth month of gestation up to full term also the farther advanced the pregnancy the lower the maternal mortality.

Unless the aseptic technique employed in attempts to deliver from below be known abdominal cesarean section is contra-indicated so great are the dangers of fatal peritonitis when the patient is infected.

The high death rate of abdominal cesarean section after operative procedures is shown by the fact that there were 10 deaths in 29 such cases, or a maternal mortality of 34.48 per cent. This 9 per cent increase in mortality over the total mortality 25.70 per cent during the same period was undoubtedly due to sepsis shock, and delay in emptying the uterus.

The mortality is distinctly higher after abdominal cesarean section in eclampsia if vaginal examina-

tions have been made prior to the operations. The danger increases directly with the number of examinations made and the lack of asepsis employed.

Any obstetric condition which makes delivery by the natural passages prolonged and difficult may be an indication for abdominal cesarean section in eclampsia. If delivery be decided upon the uterus should be emptied by the method which will perform the work the quickest and with the least trauma and shock to mother and child. However it must be borne in mind that there is more danger of sepsis when the peritoneal cavity is opened.

With the present state of our knowledge of this operation for eclampsia it cannot be denied that older and more tried methods of emptying the uterus in eclampsia give better results in eclamptics with normal pelvis and soft parts hence should not be lightly discarded in favor of the more brilliant and more easily performed abdominal operation.

But with a maternal mortality after abdominal cesarean section of 18.68 per cent in 121 cases of eclampsia in one series 13.13 per cent in 76 cases in another and 15 per cent in 60 cases where the uterus was emptied after a few convulsions, the operation under consideration has reached a stage where it can no longer be disregarded by obstetricians who have based their opposition to the procedure upon statistics which were altogether too high.

## AMERICAN ASSN GENITO-URINARY SURGEONS

MEETING HELD AT STOCKBRIDGE MAY 15-16 1914

Keyes E. L. and Mohan H. The Pathogenesis of Renal Lesions from Pyelography. *Tr. Am. Ass. G. U. S. Surgeons* Stockbridge 9 & 10. By Surg. Gynec. & Obst.

Keyes and Mohan have compared the lesions found in kidneys whose parenchyma shows infiltration as result of pyelography with the same lesion experimentally produced upon dogs. They conclude:

1. Momentary distention of the normal kidney pelvis doubtless causes no more damage than a congestion of the organ which congestion is doubtless of brief duration.

2. But if the pressure is kept up there is as Zachrisson suggested an absorption of the injected fluid into the blood vessels and lymph spaces about the kidney pelvis.

3. Although like Zachrisson, the authors have been unable to detect any collargol forced into the collecting tubules nevertheless they have found collargol in the glomeruli and in the convoluted tubules.

4. But inasmuch as there was much less collargol within the glomeruli and tubules than in the lymph

spaces and vessels they conclude the appearance of the collargol within the glomeruli and tubules is a secretory phenomenon.

5. In actual practice however a secondary filtration due to renal retention following the examination must be considered.

6. This secondary distention is of far greater importance than the primary retention at the time of injection.

7. Secondary retention is the cause of the deaths that have been reported from pyelography.

8. It is probable that the mechanism of infiltration in these cases is the same as that of primary retention in normal kidneys.

9. Alarming symptoms following pyelography are to be relieved by immediate drainage of the kidney or by nephrectomy.

Gauk, J. R. Incrusted Cystitis. *Tr. Am. Ass. G. U. Surgeons* Stockbridge 10 & 11. By Surg. Gynec. & Obst.

The author reports an interesting case of a recurrent incrustated cystitis occurring in a patient who had been operated on both supra-

**Pedersen J** An Unusual Case of Prostatic Carcinoma Originating Apparently in the Sub-cervical Glands *T Am Ass G U S geons* Stockbridge 1914 May By Surg Gynec. & Obst.

A forty seven year-old man of good physique suddenly developed hæmaturia and frequency of urination. Cystoscopy showed a large mass overlying the trigone. Transperitoneal cystotomy (October 30 1913) thoroughly exposed the mass. It was found to consist of two almost symmetrical halves their inner surfaces in contact the respective pedicles springing from points proximal to the internal sphincter. The two masses and those portions of the prostate from which they sprung were removed. Convalescence was uneventful. Bladder function was restored to practically normal. It so remains though there are evidences of intra abdominal metastasis. The pathological examination proved the growth to be carcinoma.

**Gibson C. L.** The Advantages of a Low Table and Other Points in the Technique of Suprapubic Prostatectomy *T Am Ass G U S geons* Stockbridge 1914 May By Surg Gynec. & Obst.

The low table position means that the patient lies flat on his back on a table so low that the operator has actually to lean over when enucleating the prostate there being no flexion at the elbow joint. By this maneuver a part of the operator's weight is actually used to depress the abdominal wall and allows the full use of the entire force of the fingers in enucleating the prostate. This position is of particular advantage in using gas-oxygen anesthesia as it makes it quite feasible to operate with imperfect relaxation of the abdominal wall. The operation can be performed very readily under these conditions, ten minutes or less in favorable cases.

It is of great importance to provide for free drainage and prevent the formation of clots. The drainage is best performed by using a short tube rubber or the special tube of Kenyon with an interior diameter of at least an inch. Then some form of suction apparatus which can be improvised by a simple attachment to a bathtub or other faucet is applied at once as soon as the patient is returned to bed which should be done with all possible dispatch. The wound is thus kept absolutely dry no clots form and there is little opportunity for infection to the space of Retzius. The large tube is removed in three to five days. A small suction catheter is then allowed to rest just within the lips of the bladder wound which will tend to close very rapidly. Meanwhile the patient is kept perfectly comfortable and dry. With a little manipulation the suction apparatus can be applied when the patient sits upon a chair.

**Chute A. L.** Some Things that Influence the Mortality after Prostatectomy *T Am Ass G U S geons* Stockbridge 1914 May By Surg Gynec. & Obst.

The author based his conclusions largely on a series of 53 consecutive prostatectomies with but a

single death. He felt that this was an average series of cases and the application of the same methods should give practically the same mortality in other series.

His conclusion was that the danger in prostatectomy lies almost wholly in the renal condition. There are two renal conditions that may endanger the life of the patient who is about to submit to prostatectomy. The first is renal suppuration, pyelonephritis combined with back pressure due to a residual or the other and especially dangerous condition is that where there is a chronically over-distended bladder with a non infected urine. Many of these patients are in condition where an ill-considered anæsthetic will cause their kidneys to shut down and they die in from two to five days of symptoms easy to attribute to shock, hæmorrhage or exhaustion. Such deaths are really due to renal insufficiency. He gives his reasons for believing that hæmorrhage plays but a small part in this mortality.

High mortality following prostatectomy is to be avoided first by getting kidneys that are not doing their work into a condition where they are acting efficiently second by avoiding injury to embarrassed or susceptible kidneys at the time of operation. The first is accomplished by preliminary drainage either by means of an indwelling catheter or a preliminary suprapubic drainage the second by substituting local spinal anesthesia with novocaine for the use of ether. The question of mortality hinges almost wholly upon the functioning of the kidneys. The task of getting them into condition must be accomplished before operation. For the most part the question of recovery which depends upon the renal function is settled before a patient undergoes the operation.

**Cunningham Jr J H** The Operative Treatment of Carcinoma of the Penis *Tr Am Ass G U S geons* Stockbridge 1914 May By Surg Gynec. & Obst.

The author emphasizes the importance of dealing radically with carcinoma of the penis and describes the author's method of operation. As a special causal factor in this disease phimosus is mentioned and to substantiate this view the rare occurrence of the disease among Jews is cited. Implantation of the disease by contact with a cancerous cervix malignant degeneration of venereal warts and the development of the disease on the scar of healed syphilitic chancres is mentioned.

The pathology of the subject is considered. Special reference is made to the location of the metastases and the lymphatic system of the genital is described and illustrated. It is stated that metastases occur early—in the inguinal glands—are usually bilateral and that the deep group of inguinal nodes occupying the crural canal which often contain metastases are frequently not removed at operation and in consequence it is from these nodes that recurrences become manifest.

a more thorough inspection of the bladder is possible and permitting ureter catheterization in order to examine the upper tract.

The author's aim is to call the attention of the profession to the treatment which he recommends. He takes up the discussion of the usual treatments which have been employed such as the palliative, consisting of irrigations, instillations and internal medications which have produced no lasting effects or curative results and the surgical, suprapubic, enlo-vesical and in rare instances vesico-vaginal. In all of these operations there has been either thorough curettage or excision with or without drainage.

Curettage through the urethra has been the most commonly accepted method but the one which seems to offer the best results has been suprapubic excision of the tumor masses with closure of the mucous membrane. In the author's case all of these methods were employed with the exception of the suture of the mucous membrane after excision and all of these methods were promptly followed by a complete recurrence within forty-eight hours. After injection of the *Bulgarian bacilli* into the bladder the patient was greatly improved and within three weeks entirely well and has been free from trouble since.

The author realizes that the profession has looked upon this treatment with skepticism but he feels that in such cases it will be given a chance. It is a problem of a bacterial battle in which one species of bacteria outgrows the other and in this case the lactic acid bacilli overwhelmed the proteus.

The paper is concluded by a few experiments which attempt to show the harmless nature of the *Bulgarian bacilli* to the bladder mucous membrane. The bladders of several animals were injected with these bacilli and in no case was there any inflammatory change in the bladder mucous membrane even after it had been traumatized.

Barney J. D.: Observations on the Seminal Vesicles. *Trans Am Ass Gt Srg*. Stockbridge 1914 May. By S. G. Gynec. & Obst.

The author briefly reviews the work done by others along experimental and clinical lines which has thrown light upon the physiology and histology of the seminal vesicle. He then describes some of his own work on the seminal vesicle.

The presence of elastic tissue has been shown in normal and pathological specimens. Normally it is relatively large in amount situated almost wholly in the subepithelial tissues with fairly constant prolongations into the villi of the gland cavities and in certain normal cases has been seen in minute quantities scattered irregularly through the muscular walls. In disease this elastic tissue seems to be generally decreased in amount and irregular in its distribution.

A careful study of the connective tissue of the seminal vesicle shows it to be present not only in health but also in disease. In infants it is relatively

scant; its location corresponding pretty closely with the elastic fibers. In the normal adult vesicle its presence is well marked.

Infection of the seminal vesicle seems to result invariably in the deposit of very large amounts of connective tissue which not only produces atrophy of the muscular bundles, but by its contraction distorts, obliterates or distends the glandular cavity. Dissection of numerous specimens shows that this fibrous tissue not only lies within but outside of the seminal vesicles so that they are embedded in a dense cake of plastic exudate. It is this which makes their palpation by rectal examination difficult in certain cases and the resection sometimes almost impossible.

The author has further demonstrated the presence of large numbers of sympathetic nerve fibers in the perivesicular tissues, an observation which does not seem to have been made by others.

Bacteriological investigations have thus far shown the contents of the seminal vesicle to be sterile which is contrary to the findings of others. On the other hand a careful investigation in one case of the bacterial contents of the wall of the seminal vesicle has shown it to contain bacteria, an observation which corresponds with the work of Rosenow on the stomach and appendix.

In a case in which orchidectomy had been performed some years previously the seminal vesicle on that side was found to have disappeared entirely, an observation which agrees with that of other writers. On the other hand in a case of undescended testis the corresponding seminal vesicle was found to be normal in size and in the same condition of development as the fellow.

Search for the prostatic glands in two autopsy specimens of infant dying of congenital syphilis has failed thus far to find the organ. The author has done a comparative examination of the injection of the seminal vesicle with collodion both in the living and in the dead. Radiograms of these injected organs in normal cases the contour of the glandular cavity is clearly visible. In addition to this the X-ray has revealed the presence not only in the seminal vesicle but in the ampulla of the vas of numerous undifferentiated diverticula. In pathological processes the adorgan has shown a marked change in appearance from the normal distended cavities or diverticula. Another has made a picture which is not like the normal but the contrast is so striking that the author believes that by this method of injection the diagnosis in doubtful cases can be made clear.

If the author's belief is not confirmed as yet, the presence of elastic tissue in the prostate is quite as extensively indicated a fact which would explain, in part, some of the poor results of operations for drainage or excision of the seminal vesicle alone. The operation has thus far been shown in almost every instance not a hurried convalescence, but exacerbation or fresh infections of joints, hitherto quiescent.

MacMillan J. A.: The Technique of the Perineal Operation for Extirpation of the Rectum. *Tr Am Proctol Soc Atlantic City 1914 June*  
By Surg. Gynec. & Obst.

The most important part of the preparatory treatment is a colostomy which should be done one week before the radical operation. The radical operation may be divided into four stages:

1. After thorough dilatation of the sphincters an incision should be made at the mucocutaneous junction and the bowel dissected from the surrounding tissue. This can be done without destroying the use of the external sphincter. The first stage of the operation includes the division of all the structures up to the levator ani. Before the division of the levator the first stage should be thoroughly completed and the hemorrhage controlled with pressure.

2. The fibers of the levator ani may be readily divided by passing a blunt hook above a bundle of them and drawing downward on the hook. This procedure is repeated until the muscle is completely severed. When this is completed the hemorrhage should again be controlled and a thorough examination made of the motility of the bowel and the extent of the disease.

3. The peritoneum may be entered by a blunt instrument and separated anteriorly and laterally from the bowel leaving the mesosigmoid as the only attachment. Should it be necessary to divide this, care must be taken to preserve circulation. If the mesentery be severed remotely from the bowel wall the arterial supply will be assured.

4. The fourth stage consists of the excision of the diseased portion of the bowel suturing of the distal end of the remaining bowel to the skin and the provision of adequate gauze drainage posteriorly.

III. T. C.: Anal and Rectal Growths of Benign or Doubtful Character. *Tr Am Proctol Soc Atlantic City 1914 June*  
By Surg. Gynec. & Obst.

It is stated that in a personal series of 3,000 rectal cases previously reported there were 49 benign and 76 malignant growths of the rectum. The large majority of these tumors were characteristic and the differential diagnosis was easily made. Still a few malignant growths seen in an early stage and in some unusual benign types associated with ulceration as well as in some of the perfect abscesses and fistulae located above the levator ani muscle were of such an unusual nature that the exact diagnosis was not easily determined.

The writer emphasized the fact that the operative measures to be employed differ radically in each of these conditions. An excision of the rectum is necessary for the malignant cases. A simple local incision is all that is required for the benign growth when removal is not indicated. The writer will discuss the abscesses and fistulae. Therefore a doubtful case cannot be treated as benign in which a complete amputation for a benign growth may be justified. In the case of the rectum there is not only much to be

a high mortality and a serious impairment of function as well to be considered. Furthermore the removal of a specimen of a suspected tumor is not now approved and this complicates the problem still more.

The histories of several cases which illustrate the doubtful nature of some borderline conditions occasionally found in the rectum are cited. They tend to show that aside from benign growths, some of which have many of the characteristics of malignancy there are certain abscesses which develop in the loose cellular tissue of the retrorectal and pelvic rectal spaces which are even more so. These indurated irregular swellings bulging into the rectal ampulla at first resemble very closely the sensation imparted to the finger in malignancy. A little later they become soft and boggy and fluctuation is perceptible when all doubt as to their nature is removed. The sinus from an old fistula occupying these same spaces is apt to be much more perplexing than an abscess. As the slow suppurative process goes on the rectal wall is crowded into the lumen of the bowel and assumes an irregular indurated outline which is very suggestive of cancer. Other conditions of similar doubtful character such as gummatous growths and tubercular ulceration are also discussed.

Yeomans F. C.: Coccygodynia; a New Method of Treatment by Injections of Alcohol. *Tr Am Proctol Soc., Atlantic City 1914, June*  
By Surg. Gynec. & Obst.

Simpson of Edinburgh first described the disease as a definite entity and gave it the name of coccygodynia in 1859. The main etiological factors are trauma exposure to damp and cold toxæmia and functional and organic diseases of the central nervous system as hysteria or tabes dorsalis. It usually occurs in women.

The symptom is a characteristic spasmodic aching pain in the region of the coccyx which is increased by sitting or rising and at times by urination or defecation. Pain may be localized or radiated to the bladder or perineum.

The diagnosis is established by a thorough examination both general and local. The former includes particularly the nervous system and spinal column in women the uterus and a flexa and in men the prostate seminal vesicles and urethra. Local examination is made by inserting the index finger into the rectum and palpating the coccyx between it and the thumb out side. The position contour mobility and tenderness of the coccyx are thus determined. The soft parts intervening between the coccyx and anus are now compressed and the point of maximum tenderness is thus located usually just beyond the tip of the coccyx. Careful examination is made of the anus to exclude fissure inflammation of the crypts of Morgagni blind internal fistula hypertrophied anal papillae and foreign bodies. Proctoscopy rules out rectitis.

The prognosis hitherto has been better in the traumatic cases than in those of frank neuralgia or



It is pointed out that the metastasis in carcinoma of the penis takes place along the lymphatic channels of the penis to the superficial nodes that these nodes anastomose with the deep inguinal group, and these in turn anastomose with the iliac nodes within the pelvis by way of the crural canal. It is also shown that the lymphatics of the urethra may carry metastases via a lymphatic channel which passes over the symphysis to the pelvic nodes without communication with the inguinal nodes when the growth has involved the urethra.

The operative steps are illustrated and the description is as follows:

1 A condom is placed over the penis to prevent implantation of cancer-cells during the operation.

2 A sweeping U-shaped incision is made beginning slightly above and to the inner side of the anterior superior spine on one side downward in the fold of the groin to the root of the penis and upward on the other side. This incision, which passes just through the skin outlines an apron which is dissected upward.

3 An incision just passing through the skin is made downward *ver Scarpa's triangle* from the center of Poupart's ligament. The skin is dissected inward and outward making two flaps.

4 Beginning at the top of the abdominal incision the fat which contains lymphatic channels is dissected in one mass from the abdominal fascia. This dissection is carried downward into Scarpa's triangle on either side. The superficial nodes are removed still imbedded in the fat if possible. Hemorrhage during the abdominal portion of the dissection is slight but as it is carried over Poupart's ligament into Scarpa's triangle the superficial epigastric, the superficial circumflex and the superficial external pudic vessels must be secured beneath the fat mass as they come through the fascia. If the involvement of these nodes is marked the growth may extend through the fascia lata to the deep inguinal nodes as one mass in which event the

fascia is divided if necessary to continue the dissection into the crural canal. If the mass is not continuous from the superficial to the deep nodes, the fascia lata is divided and the deep nodes freed from the femoral vessels and removed.

5 The patient is then placed in the lithotomy position. An incision is then begun at the root of the penis passing around both sides uniting beneath and continuing along the raphe of the scrotum, bisecting it. The suspensory ligament is divided and the dorsal vessels of the penis secured. The penis with the attached fat mass from the abdomen and groins is drawn downward. The dissection is carried on until the attachment of the crura to the pubic ramus is met. These are clamped close to the bone and cut away. The stump is transfixed and tied and no hemorrhage results. It is necessary to clamp, transfix and tie for the arteries to the crura may otherwise retract and cause troublesome hemorrhage. The corpus spongiosum is freed at a distance of about three-quarters of an inch in front of the bulb and cut across at this point unless the membranous urethra seems sufficiently long. It is better to leave too much than too little urethra. The whole mass the abdominal and inguinal fat containing lymphatics and nodes the penis and the crura are then removed in one mass.

6 The cut end of the urethra is then stretched to the lower part of the perineal incision and a self containing catheter placed through the urethra to the bladder. A drain is placed in the perineum about the urethra also in the wound of the abdominal skin apron on either side and both in the incision and in Scarpa's triangle.

7 The manner of suturing the scrotum whereby it is lifted upward is important so that it will not become soiled by urine.

The author's operative results and those from the literature are considered followed by case reports and a bibliography.

## AMERICAN PROCTOLOGIC SOCIETY

MEETING HELD AT ATLANTIC CITY JUNE 22 23 1914

Holding, A. F. Pseudo-Intestinal Stasis and Real Intestinal Stasis, Demonstrated Röntgenologically. *T. Am. Proc. Soc. Atlanta City, 1914*  
June By S. R. Gynec. & Obst.

Holding called attention to many anomalies of visceral position and progress of the bismuth meal that had been interpreted as pathological and which were really physiological or anatomical and completely compatible with health, laying stress upon the fact that the ileum enters the caecum normally at an angle and unless associated with proximal distention, a diagnosis of Lane's kink is not justified.

H. emphasized the point that delayed progress of the bismuth meal is not significant of obstruction unless it is more than 6 hours behind the normal schedule and associated with marked distention of the viscous proximal to the focus of obstruction. Proximal distention with obstruction to the bismuth column are the two cardinal diagnostic points of real intestinal stasis. I test for obstruction due to tumors is much easier to diagnose than intestinal stasis because the defect in the bismuth shadow made by the tumor is more definite than that made by adhesions, coils or membranes.

MacMillan J A The Technique of the Perineal Operation for Extirpation of the Rectum  
*T Am Proct Soc Atlantic City 1914 June*  
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The most important part of the preparatory treatment is a colostomy which should be done one week before the radical operation. The radical operation may be divided into four stages.

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2 The fibers of the levator ani may be readily divided by passing a blunt hook above a bundle of them and drawing downward on the hook. This procedure is repeated until the muscle is completely severed. When this is completed the hemorrhage should again be controlled and a thorough examination made of the motility of the bowel and the extent of the disease.

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The writer emphasizes the fact that the operative measures to be employed differ radically in each of these conditions. In the case of the rectum is necessary first to make a simple local excision. If that requires removal of the benign growth, the resection and drainage will suffice for the abscesses and fistulae. There is a doubtful case which cannot be treated as benign which complicates amputation of the rectum growth may be considered. In the case of the rectum the treatment is only a little more

a high mortality and a serious impairment of function as well to be considered. Furthermore the removal of a specimen of a suspected tumor is not now approved and thus complicates the problem still more.

The histories of several cases which illustrate the doubtful nature of some borderline conditions occasionally found in the rectum are cited. They tend to show that aside from benign growths some of which have many of the characteristics of malignancy there are certain abscesses which develop in the loose cellular tissue of the retrorectal and pelvic spaces which are even more so. These indurated irregular swellings bulging into the rectal ampullae at first resemble very closely the sensation imparted to the finger in malignancy. A little later they become soft and boggy and fluctuation is perceptible when all doubt as to their nature is removed. The sinus from an old fistula occupying these same spaces is apt to be much more perplexing than an abscess. As the slow suppurative process goes on the rectal wall is crowded into the lumen of the bowel and assumes an irregular indurated outline which is very suggestive of cancer. Other conditions of similar doubtful character such as gummatous growths and tubercular ulceration are also discussed.

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The prognosis hitherto has been better in the traumatic cases than in those of functional or

neuritis. The writer confidently predicts that the treatment proposed will render the latter equally amenable to treatment.

The methods of treatment that have been employed with varying results include local applications, electricity subcutaneous divisions of the muscles and ligaments attached to the sides and tip of the coccyx (Simpson) and finally resection or excision of the coccyx (Tillaux 1885). The latter has fortunately been abandoned except in those rare cases where the coccyx itself is diseased or deformed. The pelvic floor was weakened and the pain not relieved. These therapeutic methods rested on the erroneous idea that the pain resided in the coccyx proper while in fact we are dealing in some cases with a neuralgia and in others a neuritis of the coccygeal plexus or nerves.

The writer proposes a treatment based on the suggestion of Schlosser in 1907 of injecting 0 to 80 per cent alcohol in sensory nerves, thereby causing their degeneration as practiced with marked success in trifacial neuralgia.

The technique is simple and can be carried out in

the office under strict aseptic precautions. The patient with empty bowel is placed on a table in the Sims position and the skin about the coccyx painted with tincture of iodine. A 2 cc. Luer or similar syringe is filled with 80 per cent alcohol and armed with a two inch needle. The right index finger is inserted into the rectum and the point of maximum tenderness is determined by counter pressure with the thumb outside. Maintaining the finger in the rectum to guard against puncture and as a guide, the needle is introduced through the midline directly to the painful spot, and 10 to 20 minims are injected slowly.

The needle is withdrawn and its puncture sealed with collodion. The pain from the injection lasts a few minutes and is followed by a dull ache which may last a day or two. From three to five injections are usually required at intervals of about one week. The writer reports seven cases all women, treated from two months to four years ago. They required three four or five injections each at intervals of about one week. Relief was prompt and complete and all the patients have remained well.

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# INTERNATIONAL ABSTRACT OF SURGERY

AUGUST 1914

## MONTHLY COLLECTIVE REVIEW

### CRITICAL REVIEW OF THE LITERATURE ON THE PROBLEM OF GENERAL ANÆSTHESIA

By WALTER M. BOOTHBY A. M. M. D. BOSTON

Lecturer on Anæsthesia in the Harvard Medical School

#### CHLOROFORM — DOSIMETRIC METHOD

THE last (1911) report of the Special Chloroform Committee of the British Medical Association (1) is one of great value as therein are collected many important papers covering the great amount of experimental work on the dangers of chloroform anæsthesia so carefully investigated by the English school. The work of this committee was especially directed to determining the upper limit of safety for the administration of chloroform vapor.

The ultimate conclusions at which the committee has arrived with regard to the dosage of chloroform may be summed up as follows:

1. That a one per cent vapor is generally insufficient to induce surgical anæsthesia in an adult at all events within the limits of time ordinarily available.

2. That a two per cent vapor of chloroform in air is sufficient to induce full surgical anæsthesia.

3. That in pathological conditions such as depraved blood states some diatheses grave pathological states the safety dose or percentage is below two per cent and must be determined in each case.

4. That the dosage for the maintenance is of as much importance as that of the induction period and the neglect in recognizing this has caused many deaths and constantly delays convalescence.

5. That no definite limit of safety can be fixed for this dose but that it is in most cases one per

cent at first and must be lowered as time goes on (2).

Since the appearance of this report the clinical study has been continued by the secretary of the committee Dudley W. Buxton. In a paper read before the International Congress of Medicine Buxton argues very strongly for an exclusive use of the dosimetric method of chloroform anæsthesia. He says in part: "Clinical experience supports the experimental results of Sherrington, Sowton and others that whereas the organism can be taught to tolerate even relatively high percentage vapors if the strength is gradually reached yet a sudden use at the commencement of an inhalation of such a strength results in collapse and probably death. When we are working out the physiological action of a new drug we use the utmost care to measure the strength employed. When our results are standardized we employ such and such a strength per kilo of body weight and know that we shall in every case insure a certain result which we anticipate. In the case of chloroform we have now standardized for the normal person that a strength of vapor somewhere about two per cent (by volume) will induce anæsthesia that less will only cause sleep while a greater strength will lessen the activities of respiration and circulation and may at any moment cause cessation of breathing and heart standstill. And yet the methods most generally employed provide no means by which the administrator can even know the strength of vapor—that is the dose per kilo—he is

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to an air tight mask and face-piece such as is used in gas-oxygen-ether anesthesia.

The accuracy of the Connell apparatus is very great as has been shown by Boothby and Sandiford (17). It certainly does not vary more than 3 mm. from the theoretical tension as shown by their experiments in which the tension delivered by the Connell apparatus was controlled by passing the delivered mixture through a Waller gas balance.

As there are three ways of stating the proportion of ether or other gas present in a mixture and as confusion occurs if one is not on guard to distinguish these forms one from the other it is necessary to refer to this in some detail.

1 The proportion of ether may be expressed as percentage by weight that is 15 per cent by weight of ether and 85 per cent by weight of air there is no justification for the use of this method.

2 Or the same dosage can be expressed in per cent by volume that is 6.38 per cent by volume of ether vapor and 93.62 per cent by volume of air both of course at the same temperature and pressure. Percentage by volume is the method usually adopted by the pharmacologists.

3 Or finally it can be expressed in millimeters of mercury representing a fraction of the barometric pressure. For instance with a barometer of 760 mm the volume per cent of 6.38 would mean  $60 \times \frac{6.38}{100} = 48.5$  mm. On the other hand,

at Colorado Springs with a barometer of 630 mm a volume per cent of 6.38 would give a tension of only 40.2 mm—a tension not sufficiently strong to keep the patient anesthetized. As the volatile anesthetics obey the well known gas laws and form compounds with the protoplasm of the cells in a quantitative way directly according to the tension of the anesthetic vapor it is advisable to use that standard of expression which both represents the action of the drug and also remains unaffected by barometric changes.

Boothby and Sandiford (17) give the following table illustrating how the Connell apparatus, when calibrated in tension, adjusts itself to barometric changes and conversely how it does not do so if calibrated in percentages by weight or percentages by volume. Set at the same point the apparatus would deliver according to the three systems of expression as follows:

9.46% by wt = 3.91% by vol = 24.6 mm at 630 mm and 21° Colo. Springs (6000 feet)  
7.78% by wt = 3.18% by vol = 24.8 mm at 780 mm and 21° sea level

Connell (15) gives very interesting curves for the ether pressure required in the alveolar air and

shows that in the preliminary stage an ether tension as high as 182 mm can be administered with safety and that for the inductive period it must at least be over 100 mm in order that the induction may not be unduly prolonged. After five minutes the curve falls and reaches 90 mm in ten minutes when surgical relaxation becomes complete. During the next half hour the curve scales downward reaching a pressure of about 50 mm in thirty or forty minutes. He shows that on this tension of 50 mm. as a base anesthesia can be maintained for men of every type for many hours without increasing or decreasing the depth of narcosis.

The curve worked out by Connell has been carefully checked by Boothby (12) and his investigation confirms the curve as given by Connell. Boothby however believes it is distinctly safer to allow the inductive period to take fifteen minutes and during that time not to force the ether tension materially above 100 mm. Most of the latter's investigations were made on patients on whom Prof. Cushing performed a cerebellar operation thus necessitating a prone position with the head supported by a special rest. These operations frequently lasted three hours. The patients were carefully placed in the position in which they were to remain during the operation and the ether started. It was therefore necessary to so administer the anesthetic as to cause no excitement, struggle or scarcely a movement on the part of the patient. To produce smooth motionless induction it is necessary that the ether tension be only gradually brought up to 100 mm.—a period of five or six minutes—maintained at this level for seven to ten minutes and then gradually lowered to the true anesthetic tension of 50 mm. The time required for induction varies materially and depends on the size of the patient and the rapidity of the circulation as compared with the size of the body—the smaller the patient and the greater the volume of blood passing through the lungs per minute the quicker will he be anesthetized and also the more rapidly will he recover on removal of the anesthetic.

Although for the reasons cited patients are found to vary materially in the length of time required to saturate their bodies up to 50 mm of ether vapor yet no measurable difference in the final tension has been demonstrated. In the patients thus studied the anesthetic tension required was the same regardless of age sex or condition of chronic alcoholism. In regard to the influence of age two cases were cited (12) in babies sixteen hours and nine months old which required the same ether tension of 50 mm to maintain anesthesia though on account of the rela-

giving while he possesses no accurate control over the unmeasured quantities of the drug employed. He is forever experimenting upon his patients and the results he obtains depend wholly upon his personal acumen as an experimenter. He depends solely upon his powers of observation if the results consequent upon his unknown doses seem to be touching upon the zone of danger he limits his supply of chloroform but by how much he does not know. That many men can intuitively stumble upon a safe dose when employing undosimetric methods is obvious and that experience will enable such to anticipate events: undoubtedly true but the system lacks the immaturity of science and is apt to fail at critical moments. (7)

Buxton on the basis of a very extensive experience concludes his paper by saying: "I believe both from experimental and critical evidence dosimetric method of giving chloroform are the only safe means of exhibiting that drug and by their use its dangers are abolished or so far lessened as to be negligible."

For an apparatus Buxton makes use of the Vernon Harcourt regulator. According to Harcourt's own experiments the percentage of chloroform which from theory should be two per cent varies according to the depth of respiration from 1.54 per cent to 2.26 per cent, though the mass—1 c. grams per mm.—of chloroform remains quite constant. (3) As volatile anesthetics act entirely according to their tension (9) the mass inhaled is of no consequence an error in the estimated dosage of nearly 25 per cent does not allow very accurate deductions as to the strength of chloroform required and by the use of such an apparatus no fundamental facts as to the determination of the anæsthetic tension of chloroform could be made. Such an inhaler however would in the hands of one acquainted with the signs of variation under given conditions, render it practically impossible to give a fatal overdose of chloroform and is therefore better than a mask from which no indication of the strength could be obtained. The Connell anæsthetometer if calibrated and properly modified for chloroform would deliver chloroform vapor with great accuracy independent of the volume of respiration.

Buxton's contention that the dosimetric administration of chloroform renders the dangers thereof negligible is undoubtedly well taken so far as immediate sudden death is concerned as thereby an excessive tension of chloroform cannot suddenly overwhelm the heart. Sherrington and Sowton (4) have shown that the entrance of chloroform into the cardiac tissue and its withdrawal from

that tissue follow closely, within a wide range of dosage the solution tension of the chloroform in the perfusing solution also that the degree of depression of the heart was a function of the solution tension of the chloroform. Embly (5) has shown that when air containing more than two per cent of chloroform was administered in the inspired air slowing of the heart ensued and that when higher percentages were employed the degree of the inhibition was rapidly intensified. Because the margin of safety is very narrow between a tension of chloroform dangerous for the heart and the tension used during the induction of narcosis deaths in chloroform anesthesia are very apt to occur in the early stages. If as Buxton (7) recommends chloroform is never administered stronger than two per cent (by volume) such deaths can be avoided a dosimetric method of administration is obviously a necessity.

All trace of cyanosis must be absolutely avoided when using chloroform as Sherrington and Sowton (6) have shown that oxygen-want intensifies the action of the same tension of chloroform on the heart and other tissues and that the depression so caused is more difficult to remove.

As yet we do not know whether or not the dosimetric method will render delayed chloroform poisoning less likely to occur. Clark (11) states without reference that experimental work has shown that chloroform is even more likely to cause delayed poisoning in pregnant dogs and cats than in non-pregnant individuals.

Using an accurate dosimetric method and with the avoidance of cyanosis the question of delayed chloroform poisoning must be re-investigated.

#### ETHER — DOSIMETRIC METHOD

It is not necessary to adopt the dosimetric method of administering ether from the point of view of the safety of the patient as is the case when chloroform is used. Its value is in teaching the anæsthetist the potency of the drug, the degree of anesthesia that can be produced by various tensions, the time it takes to saturate the body up to the anæsthetic tension of 50 mm. and, finally that there is no appreciable alteration in the tension required caused by variation in age, sex or chronic alcoholism. (12)

For the dosimetric administration of ether the apparatus devised by Karl Connell (13, 14) of Roosevelt Hospital, New York City though at first glance it may appear complicated and impracticable is as a matter of fact very simple and easy to handle. It should always be used for intratracheal or for pharyngeal insufflation. When used in ordinary work it should be attached

The experimental data given by Boothby show that surgical narcosis is produced by a tension of 50 mm — a higher tension produces a dangerously deep narcosis and a lower tension an inconveniently light anaesthesia.<sup>1</sup> The percentage saturation of the nerve-cell caused by any given tension of ether is not known. However it can be assumed that the same degree of saturation is always produced by the same tension and that eventually a correct dissociation curve can be determined as in the thoroughly studied reversible reaction  $\text{Hb} + \text{O}_2 \rightleftharpoons \text{HbO}_2$  in which the percentage saturation of the haemoglobin with oxygen is dependent on the oxygen tension to which the haemoglobin is exposed.

If such be the case our conception of the theory of production maintenance and recovery from anaesthesia can be rendered more complete by the following hypothetical formula. Let Mn represent the molecules in the nerve-cell affected by the anaesthetic and let An represent the group of inhalation anaesthetics. Then substituting in the above haemoglobin-oxygen equation the reversible reaction  $\text{Mn} + \text{An} \rightleftharpoons \text{MnAn}$  is seen to take place. In this reaction the percentage saturation of the Mn molecules in the nerve-cells and therefore the depth of anaesthesia is dependent on the tension of the anaesthetic vapor to which these susceptible molecules are exposed. The percentage saturation caused by ether at a pressure of 50 mm produces that degree of cell inhibition that is necessary for ideal surgical anaesthesia.

The evidence here cited shows that there is little or no variation in the anaesthetic tension of ether in different individuals. Clinical experience has proven that some patients require by the ordinary methods of anaesthesia more ether poured upon the cone than do others. The apparent discrepancy between these two facts can be accounted for by the following three factors.

In the first place as the author explained in an earlier paper (18) there is a wide variation in the amount of air breathed by different patients. Therefore varying amounts of ether must be poured upon the cone to bring the fluctuating amounts of air up to the same tension. When attempting to obtain the higher tensions in larger amounts of air the waste of liquid ether is tremendous just as the amount of fuel necessary to increase the speed of an engine above a certain point is great in proportion to the result obtained.

Secondly the volume of blood flowing through the lungs per minute varies greatly not only in different individuals but at different times in

the same individual further the relative amount passing through the various organs will fluctuate from time to time. Accordingly it is evident that the rate at which the brain for example becomes saturated or desaturated—that is, at the rate at which the patient becomes anaesthetized or recovers therefrom—depends upon the amount of blood flowing between the lungs and the brain—assuming the alveolar ether tension to remain constant. At present we have no means of estimating changes in the circulation rate and therefore cannot calculate the exact value of this factor. That it is of considerable moment however can be judged from the experiments previously reported by the author which showed that the rate of elimination of  $\text{CO}_2$  was dependent not only on the volume of respiration but also on the rate of blood flow (25).

The third factor is the possibility of a variation in the rate of chemical reaction due to slight changes in chemical environment. On account of the well known influence that environment exerts on the rapidity of chemical reactions it seems quite possible that even small changes in acidity viscosity permeability or temperature might affect both the rate at which the union between the ether and lipid takes place during the period of saturation and also the rate at which dissociation occurs during desaturation on the reduction of the ether tension.

#### WARMING ETHER VAPOUR

The question of the necessity of warming anaesthetic vapors has received considerable attention of late years. Confusion has arisen from not differentiating latent heat the heat needed to convert a liquid into a gas and the specific heat—the heat required to raise the gaseous mixture of ether and air up to the body temperature. In dealing with inhalation anaesthesia we are not concerned with latent heat because that is acquired from the surrounding air. The amount of heat required to raise the ether-air mixture from the temperature at which it is inspired to body temperature has been worked out by Boothby (18). His conclusions based on experimental work are that the loss of heat directly attributable to warming anaesthetic vapors is negligible in comparison to that from the body surface. He deems it far more important and practical to prevent the temperature of the patient from falling by keeping him dry and warmly covered.

#### NITROUS OXIDE-OXYGEN

Crile (23) strongly advocates a nitrous oxide-oxygen anaesthesia plus local anaesthesia of two

<sup>1</sup> Low sensory stimuli are blocked by the use of local anaesthetic.



tively rapid circulation the saturation was quickly accomplished. It was likewise pointed out that the anæsthetic tension could not vary with age because in the case of the baby sixteen hours old had an operation occurred a few hours earlier before parturition the foetus would have been saturated up to the tension of 50 mm requisite to narcotize the mother. It is well known that pregnant women can be anæsthetized with safety.

Morphine up to doses of  $\frac{1}{6}$  gr cannot be demonstrated to have any effect on the anæsthetic tension of ether (12).

#### ETHER — OPEN DROP METHOD

Largely through the influence of the Mayo clinic (31) the open-drop method of ether anæsthesia with the use of a simple wire mask to prevent the wet gauze from lying directly on the patient's face has supplanted the various forms of ether cones. The use of the drop-method together with the realization that stertorous obstructive respiration even if not of sufficient degree to produce cyanosis can be avoided by the proper control of the air way together with the administration of an even and not too concentrated ether has in the last few years greatly improved the results obtained by the exhibition of ether as an anæsthetic. It is by far the best method for routine work.

The question of the ether percentage obtained by the use of this method has been dealt with quite fully by Boothby (18). He has shown that small amounts of ether poured upon the mask will easily produce a tension of ether in the inspired air sufficient to etherize a patient provided the volume of air breathed by the patient does not exceed twenty liters per minute. If the volume of respiration is over twenty liters per minute it is difficult and sometimes impossible for the inexperienced to produce a sufficiently high tension so that the patient is quickly etherized. He also pointed out that under such conditions the vaporization of the ether could be aided by alternately placing the warm hand of the administrator on either side of the mask but in so doing care must be exercised not to hinder in any way the passage of air to and from the patient.

#### THE ANÆSTHETIC TENSION OF ETHER VAPOR AND THE LAWS GOVERNING DOSAGE

The theoretical side of anæsthesia is very well set forth by Meyer and Gottlieb (8).

They emphasize the fact that (9) a certain degree of saturation of the tissues with the anæsthetic corresponds to every variation of the partial pressure of the gas in the alveolar air. The

depth of anæsthesia is consequently at every moment dependent on the partial pressure of the anæsthetic in the gas mixture respired.

From this law first propounded by the French physiologist P. Bert follows the extremely important conclusion for the management of anæsthesia that the depth of narcosis and the danger thereof is not at all dependent on the absolute amount of the anæsthetic which has been used but upon the concentration of the anæsthetic in the respired air. The control and modification of the degree of action which with non volatile drugs is attained by modification of the absolute size of the dose is, during the administration of gases attained by the modification of the concentration administered. Consequently in every moment of the anæsthesia a sufficient dilution of the anæsthetic with air is an essential condition.

That the depth of anæsthesia is eventually dependent on the tension of the anæsthetic in the inspired air is of course true. It is, however, immediately dependent on the tension of the ether in the central nervous system. Both Conell and Boothby have found that only slight variations if any occur in the anæsthetic tension required by human beings whose central nervous system is not otherwise under the influence of drugs or toxæmias. The divergent results of previous observers has been due to the fact that allowance was not made for the time requisite to bring about a condition of equilibrium in the tension of the anæsthetic in the central nervous system and the inspired air.

Boycott, Damant and Haldane (24) have studied the rapidity of saturation and desaturation of the body for nitrogen up to a pressure of six atmospheres. According to their calculation the body of a man would be half-saturated with the excess of nitrogen in twenty minutes three-fourths saturated in forty-six minutes etc the pressure remaining constant. They also point out that the rate of saturation and desaturation would vary in different individuals according to the relative mass of blood and rate of circulation. In the same individual different organs would be more or less quickly saturated and desaturated according to the proportional volume of their blood supply.

The term anæsthetic tension has been adopted by Boothby (12) to express the value of the lowest partial pressure of ether vapor which when continuously respired, will maintain an ideal surgical narcosis after equilibrium has been obtained between the tension of ether in the inspired air, alveolar air, blood, and tissues.

The experimental data given by Boothby show that surgical narcosis is produced by a tension of 50 mm—a higher tension produces a dangerously deep narcosis and a lower tension an inconveniently light anaesthesia.<sup>1</sup> The percentage saturation of the nerve-cell caused by any given tension of ether is not known. However it can be assumed that the same degree of saturation is always produced by the same tension and that eventually a correct dissociation curve can be determined as in the thoroughly studied reversible reaction  $\text{Hb} + \text{O}_2 \rightleftharpoons \text{HbO}_2$  in which the percentage saturation of the haemoglobin with oxygen is dependent on the oxygen tension to which the haemoglobin is exposed.

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linds in all cases one for immediate and the other for a later effect in a considerable percentage of cases ether is also used to deepen the narcosis. The general anæsthetic is administered by nurses of exceptional capability especially trained for the purpose with great care and who have had much practical experience. Using the principle of anoci-association the mortality at Lakeside Hospital has been reduced from 4.3 per cent in 1908 to 0.8 per cent in the last 1,000 operations performed by Crile and his associate W. L. Lower.

In Crile's clinic more attention has been paid to the refinement of the problem of anæsthesia than in any other clinic in the world. In attempting to apply this form of anæsthesia elsewhere no details can be eliminated and these consist on the part of the surgeon in careful delicate operating with large incisions and avoidance of the use of retractors, the use of local anæsthesia to prevent reflex hypertonicity of the muscles thereby decreasing the amount of ether needed to produce a deeper degree of anæsthesia which otherwise would be necessary and on the part of the anæsthetist, training and skill so that cyanosis is prevented, a clear air way maintained and the proper mixture of nitrous oxide, oxygen and ether administered.

Straight nitrous oxide-oxygen anæsthesia without local anæsthesia and without ether as recommended by Prince (29) cannot produce except in a small percentage of cases, the ideal and safe anæsthesia as represented by Crile's complete technique with a highly trained team.

The mechanical difficulties of nitrous oxide-oxygen-ether anæsthesia have been overcome by the use of the principles pointed out by Cotton and Boothby (16) and later adopted by Gwathmey and Woolsey (26), A. H. Miller (27) and others. These principles are: (1) Reduction of the pressure of nitrous oxide and oxygen to an easily controlled pressure of about 25 lb. to the square inch; (2) a visible method of estimating the relative proportion of each gas being administered; (3) easy addition of ether in appropriate amounts; (4) exclusion of air; and finally (5) maintenance of an absolutely free air way.

The desirability of nitrous oxide is increased as the necessity for ether is diminished. This factor depends on the surgeon and requires the adaptation of the technique used by Crile which allows the use of a lighter zone of anæsthesia. This point will presently be discussed more fully.

Several instances of threatened coma and one case of death in coma (30) in patients suffering with diabetes have come to the author's attention following nitrous oxide anæsthesia. Whether or

not the nitrous oxide was administered in such a way that cyanosis and oxygen-want also occurred is not known. At all events there seems little justification as yet for the acceptance of the idea that nitrous oxide is absolutely harmless to the kidneys as some writers and as the manufacturers of nitrous oxide claim.

#### SYNERGISM

Fuhrer (28) has suggested the term synergism to denote either the one-sided or the reciprocal augmentation of the action of one drug by that of another. The synergistic action of morphine, nitrous oxide and ether has been long recognized in a qualitative way. Crile's (23) technique is the practical application of this phase of pharmacology; he however goes even further and by the use of local anæsthetics renders it possible to use surgically a less profound general narcosis than would otherwise be necessary.

From the work of Crile previously referred to it is evident that the skillful application of the synergistic action of certain narcotics—general and local—has brought about an unequalled mortality record. In explanation of his results Crile has advanced the theory of anoci-association. However to many of those familiar with the laws governing the absorption and distribution of anæsthetic gases and the probable tensions of such gases requisite to produce narcosis under a synergistic method of administration it seems more satisfying to adopt a working hypothesis based on definite demonstrable facts in pharmacology rather than on the more abstruse and less clearly defined data of anoci-association.

Connell's preliminary tensions of nitrous oxide and ether that he has found necessary for producing complete surgical narcosis agree very closely with some of the author's unpublished calculated values. Connell finds that the following mixture will take care of any case:

Nitrous oxide at a tension of 650±30 mm

Oxygen at a tension of 85±15 mm

Ether at a tension of 15±5 mm

Nitrogen at a tension of 10±5 mm

Only a slight percentage change in the tension of nitrous oxide can be accomplished by decreasing the oxygen tension as it is not safe to lower the oxygen tension below 70 mm. Any increase in the depth of narcosis that is required can only be obtained by the addition of ether. An ether tension in excess of 20 mm. will rarely be needed however even if more than 10 mm. are required the character of the narcosis departs from the desirable nitrous oxide type and tends rapidly to become similar to a straight ether anæsthesia.

The necessity for deepening the narcosis with ether can however be in part avoided by delicate operative manipulation but mainly by preventing the sensory stimuli from tending to awaken the patient in other words it is unnecessary to produce in the central nervous system such a degree of cell inhibition as would be the case if those cells were continually receiving stimuli.

It seems therefore that the explanation of the success of Crile's technique in so far as it concerns the anaesthesia as distinct from the judgment and skill of the operator is pharmacological instead of phylogenetic that is his method produces less injury to the organism as a whole first by taking advantage of the synergistic action of several narcotics using none of them in an injurious dosage and secondly by decreasing the amount of cell inhibition needed by making use of a lighter zone of anaesthesia through the avoidance of awakening stimuli rather than by the prevention of the shock or exhaustion that is assumed to be produced by these stimuli.

Recently a new combination of narcotics has been tried namely magnesium sulphate and ether. Meltzer and Auer (19) have shown that rabbits which have received 0.6 gm. magnesium sulphate per kilo a dose insufficient to narcotize normal animal can be completely anaesthetized by the administration of an ether tension in sufficient to do so in a control rabbit. In a personal communication Meltzer has informed the author that he and Peck are studying this question on human beings and that the results are very gratifying.

If magnesium sulphate in small safe doses is found to materially reduce the tension of ether required to produce narcosis in humans, and if the antagonistic effect of calcium to magnesium sulphate can likewise be adopted in surgical anaesthesia marked advance in our anaesthetic methods may shortly occur. The awakening effect of calcium injected into a rabbit was very strikingly demonstrated at the annual meeting of the Physiological Society in Philadelphia by Gates and Meltzer (22).

#### CENTRAL AND PERIPHERAL ACTION OF ANAESTHETICS

Auer and Meltzer (20) have studied the effect of ether inhalation upon the skeletal motor mechanism and found contrary to the general impression that ether has a decidedly depressive effect on the peripheral nerves and muscles they consider that ether besides its undoubted central effect is capable also of a curare-like action.

Githens and Meltzer (21) found however that the phrenic nerve and the diaphragm were distinctly less affected, for after complete stoppage of the spontaneous respiration indirect stimulation of the phrenic nerve as well as the direct stimulation of the diaphragm cause a fairly good contraction of that muscle. On the other hand it is evident that the irritability of nerve and muscle is a good deal in the course of ether anaesthesia and that toxic action upon the peripheral respiratory mechanism begins at an early stage of the etherization. They conclude therefore that probably the intoxication of the peripheral respiratory mechanism has some share in the early stoppage of the respiration by ether anaesthesia.

On the other hand Githens and Meltzer found that chloroform practically does not affect the irritability of motor nerves.

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# ABSTRACTS OF CURRENT LITERATURE

## GENERAL SURGERY

### SURGICAL TECHNIQUE

#### ANÆSTHETICS

McCardie M B Blumfeld Hewitt Waggett and Others Discussion on Posture in Relation to General Anæsthesia *Proc Roy Soc Med* 9 4 vii, Sect A 38th ann 39 By Surg Gynec & Obst

McCARDIE opened this discussion stating that the importance of posture in general anæsthesia is a can scarcely be overstated. Not striving to cover the whole ground as done in such an admirable work as Hewitt's he analyzed various postures as affecting (1) respiration (2) circulation (3) nerves of extremities (4) muscles and joints (5) viscera, as stomach intestines or kidneys.

A sleeping child is a criterion for study and its general semiflexion of joints a hint for anæsthesia. Operations on the upper part of the body suggest a higher position of head and shoulders than in operations on the lower half. In brain cases an extended head rest and for the prone position elevating pads under the clavicles and iliac crests are necessary to relieve respiration.

Throat operations demand a posture which favors exit of blood, i. e. lowered head. It may develop that intratracheal insufflation will make possible an upright position and yet avoid gravitation of blood into the trachea. The head extended over the end of the table is against the rule for semiflexion in spite of it favoring exit of blood. Sitting upright is a much discussed posture, one point being that the light degree of anæsthesia allows it, another against it is chloroform with its alleged danger of syncope though some claim exemption from experience of this. The semirecumbent posture is condemned. The danger of brachial paralysis from extended arms is evident. Operations on the lung and pleura demand careful attention so as to give the good lung the utmost freedom.

The Trendelenburg position is one involving many considerations and much difference of opinion based on conditions present in the cases discussed. It is the position of health assumed for easy breathing. More bronchitis was found after it. Pneumonia was more common, too pulmonary embolism but here the flexion of legs was a factor to consider in the consequences. In eight cases of ether and eight of chloroform almost no urine appeared in the bladder. Aphasia and hemiplegia followed in one case in a other death upon raising a patient with valvular disease of the heart. In 1913 GATCH GARY and MANLY reported a thorough experimental study of this

position finding asphyxia more fatal in it than in the horizontal. In conclusion it should be tolerated as little and for as short a time as possible and with the legs in a position of ease, never in organic diseases of the heart, lungs, arteries, or kidneys nor in obesity. The joints suffer from constrained positions more than is realized as Goldthwaite has pointed out. This indicates attention to the position of ease for joints in any posture. The lithotomy position must not be extreme to protect respiration and the joints of the back.

The post-operative posture should be a natural one as in sleep for persistent vomiting after recovery the sitting posture may relieve, helping the stomach to empty itself naturally or for that dreadful condition dilatation of the stomach, the prone position is helpful even having restored one in extremis.

BLUMFELD rallied to the defense of the Trendelenburg position under chloroform for shock and pointed out that the sitting position is dangerous under a deep anæsthesia when not under a light.

HEWITT also showed some advantage in the Trendelenburg position for shock, the embarrassments therefrom being due to obstructed air way and usually removable. The head-down position in transferring patients after operation is bad, the lateral being desirable.

WAGGETT advocated the sitting posture for nose and throat cases as helping the surgeon and not harmful for the patient, the anæsthesia not being induced after an initial low posture of course, the anæsthesia moreover being a light one. HARMER on the other hand advocated the lateral position for nose and throat cases.

FRANK W PRINCE

Gwathmey J T O! Ether Anæsthesia *N Y M J* 1914 xcix 1 By Surg Gynec & Obst

Gwathmey refers to the infancy of anæsthesia as still shown by our limited knowledge of a great number of substances having some anæsthetic property for there are nearly a thousand of them and we have adequate knowledge of only about a dozen as anæsthetics.

Animal experiments to the number of about two thousand were performed to ascertain the value of ether as an anæsthetic when introduced by rectum. The solution first used was about 500 ccm of 5 per cent ether in normal salt solution. Ether in oil was then substituted, the oil preventing irritation and holding the ether in solution while

the ether by the change from liquid to gas in the rectum checks both evaporation and absorption thus regulating the dose steadily. Another regulating factor is the fact that the elimination of ether from the lungs is faster than the absorption from the rectum. Experiments on various oils for the purpose were made and caron oil chosen because it parts with its oil in about one fourth the time of other oils.

Experiments were made on dogs with various proportions of olive oil and ether resulting in the adoption of a solution of from fifty to seventy five per cent ether according to the age and size of the individual the quantity used to be about one ounce to every 20 pounds of body weight. The injection is made all at once following a preliminary hypodermatic of morphine and atropine and a rectal injection of five to twenty grains of chloroform the rectum being clean. When the operation is finished or in case the dose proves too much the oil-ether mixture may be withdrawn by a pair of small rectal tubes inserted. In conclusion an irrigation with cold soapsuds follows and finally 2 to 4 ounces of olive oil are introduced and then a pint to a quart of cold water. Recovery of consciousness comes in fifteen to thirty minutes.

Safety governed the earlier work on human beings and the lower percentages of ether were insufficient for a surgical anesthesia in some while in others supplementary ether by inhalation was needed. Now by the above method results nearly ideal in every respect are assured. No rectal troubles ensue. Further development is directed in three ways: (1) as a distinct method, (2) with an inhalation method—gas ether or chloroform, (3) with a local anesthetic thus broadening the field of local anesthesia. *FRAK W PR 20*

Gwathmey J T: *The Technique of Oil Ether Colonic Anesthesia* N Y M J 19 4 222  
By Surg Gynec & Obst.

For this method of anesthesia the apparatus is a long rectal tube a clamp for it a glass funnel and a Lockwood tube. Preparation consists of clearing the rectum by castor oil and enema chloroform five to ten grains in ether and olive oil by rectum morphine one quart grain with atropine one one hundredth grain hypodermatically, and finally ether seventy five per cent in olive oil, injected by gravity into the rectum the quantity about one ounce for each 20 pounds of the patient's weight. 1 e. 8 oz for an average adult of 160 pounds takes one minute for each ounce the patient in the Sims position. Unconsciousness may be expected in five minutes and anesthesia in about ten more.

Care to maintain a free airway for breathing is very important as in any anesthetic. Supplementary ether inhalation may be required for induction. At any time the residual oil ether in the rectum can be removed by lowering the funnel tube and at the end of the operation beside this cold soapy water is injected by this tube and re-

turned by the other introduced alongside and finally a pint to a quart of cold water is left in. Reflexes remain active and stertor and puffing of the lips are not allowed. Caution is urged against signs of too profound an anesthesia and against the danger that the simplicity of method may be a snare to the unwary. *FRAK W PR 20*

Boothby W M and Sandford I: *The Calibration of the Waller Gas-Balance and the Connell Anesthetometer* J Fla M A of Ex Therap 19 4 v 369  
By Surg Gynec & Obst.

The calculations necessary for calibrating the Waller gas balance for ether are given in detail. Tables are appended to simplify the corrections needed for variations in barometer temperature water vapor and alcohol content of ether. It is probable that the corrected tension is accurate to within  $\pm 0.2$  mm.

By means of the Waller gas balance thus calibrated the Connell anesthetometer has been tested and it has been found that the tension of ether delivered by the apparatus was on the average  $2.1$  mm too high the maximum error being  $\pm 3.3$  mm. The Connell apparatus adjusts itself to atmospheric conditions if the ether delivery is expressed in tension and not in percentages.

Boothby W M and Peabody F M: *A Comparison of Methods of Obtaining Alveolar Air* A J I Urol Med 19 4 221 497  
By Surg Gynec & Obst.

As a result of an extensive comparative study of various methods for obtaining the tension of gases in the alveolar air with especial reference to the use of these methods in clinical work the authors have arrived at the following conclusion:

The Haldane method gives results which approximate closely the average gaseous composition of the alveolar air. It is the most reliable and accurate method when used on intelligent and experienced subjects. The necessity however of obtaining very deep and forcible expirations limits its usefulness when working with untrained or sick persons.

The Lindhard method and its modifications give values analogous to those of the Haldane method. The method has the advantage however of not requiring such deep expirations as the Haldane method. The technique of taking the samples is however much more difficult for the observer. In certain types of pathological cases, notably in unconscious or very sick patients with a large alveolar ventilation the method is useful and the technique simple.

The Fleisch method gives values for the carbon dioxide tension which are higher than those obtained by the Haldane and Lindhard methods. Successive determinations give sufficiently constant values. The technique of the method both for the observer and for the subject is so simple that the method is especially useful for routine clinical work.

## SURGICAL INSTRUMENTS AND APPARATUS

Sinclair D A A Retro-Urethral Cystoscopic  
Guide for External Urethrotomy V Y M J  
1914 XCIX 677 By Surg Gynec. & Obst.

In order to obviate the difficulties of external urethrotomy without a guide Sinclair has assembled the following instruments a trocar and cannula (15 French) three inches long a straight observation cystoscope (12 French) five inches long a Herzfeld eustachian catheter (12 French) with spiral end and fibroform bougie to fit catheter

The technique is as follows Under local or general anesthesia with the bladder full of urine or filled with boric solution from a pressure syringe with the patient in slight Trendelenburg position the trocar cannula is plunged slightly antero-forward into

the bladder one inch above the p. c. symphysis After removing the trocar and irrigating the bladder with boric solution, the cystoscope introduced through the cannula and the internal urethral meatus located After placing the cannula in proper position the eustachian catheter is substituted for the cystoscope and the urethra catheterized down to the urethral stricture The patient is then put in lithotomy position for a perineal incision down to the catheter whereby the urethra is opened for perineal drainage and the stricture field eradicated, the suprapubic puncture closing without drainage The author also shows a modification of the cystoscope so that the internal urethral mouth may be catheterized with a flexible metal bougie under direct vision the catheterizing instrument

CRAIG E. BURSITT

## SURGERY OF THE HEAD AND NECK

## HEAD

Bloodgood J C: Carcinoma of the Lower Lip  
Its Diagnosis and Operative Treatment S 72  
Gynec. & Obst. 94 1904  
By Surg Gynec. & Obst.

In the Surgical Pathological Laboratory of the Johns Hopkins Hospital between the years 1892 and 1913 the records of 200 cases of lesions of the lip have been collected Of these 15 are distinctly benign and all have remained well since the excision of a V shaped piece of the lower lip including the lesion These lesions may be looked upon as precancerous They are identical with the first local trouble on the lip as described by patients who come under observation with cancer There are 18 examples of malignant warts which represent the early stage of cancer 1 wart 17 of these patients were permanently cured by complete local excision of the cancer It seems unnecessary at this stage of the disease to remove the lymphatic glands of the neck In 167 cases the lesion was a fully developed carcinoma Among these there were but 5 examples of carcinoma bacilliforme (Krompecher) Among these 167 cases in 29 the disease, on account of its local infiltration glandular or bone involvement had become inoperable—about 12 per cent

The author shows that the local propaganda of education has increased in the past five years the per cent of benign lesions from 4 to 18 and has decreased the inoperable cases from 18 to 8 per cent.

The investigation of the end results of all cases of the fully developed carcinoma of the lower lip in which five years or more have elapsed since operation demonstrates that the glands below the jaw should always be removed When only the lesion of the lip has been excised there have been 37 per cent of late recurrences in the gland of the neck Operations at this stage rarely accomplish a cure perhaps in only 20 per cent of cases

When the operation consisted of the removal of the lesion on the lip and of the glands of the neck and when they have shown no metastasis under the microscope 95 per cent have remained well when however the glands did show metastasis only 50 per cent were cured

The investigation also discloses the danger of any method of treatment of the disease on the lower lip which fails to cure the local lesion or to remove the glands of the neck While the per cent of cures in the three primary groups are respectively 63 95 and 50 per cent it falls in the recurrent cases to 20 and 20 per cent, respectively In all forms of cancer the two factors over which we have control are the duration of the disease and its surgical treatment To increase the number of cures of cancer of the lip people must be educated to the potential dangers of the smokers' burn at the mucocutaneous border of the lip of unhealed blisters and ulcers and all wounds of warts and any area of irritation If such a lesion does not disappear spontaneously within a month it should be excised with a margin of healthy tissue The piece should be promptly subjected to microscopic examination and if carcinoma is present the operation upon the glands of the neck should follow

The author also describes in detail a method of removing the glands of the neck which promises better results in cases in which the glands are involved

Comparative Table of Results in Cancer of Lower Lip as Ascertained in 1908 and 1913 in the Hopkins Hospital and the Johns

Benign lesions  
Malignant warts  
Cancer totals  
Operable  
Not operated  
Inoperable



This table shows that the local propaganda of education has increased the benign lesions in which there are 100 per cent of cures from 4 to 18 per cent and decreased the hopeless or inoperable cases from 18 to 5 per cent.

The period 1908 represents 19 years — from 1889 the period 1913 — five years.

Table of Per Cent of Cures in the Operable Cases of Cancer Up to 1908

Excision of	Primary			Recurrent		
	Total	Cured	Local Recurrence	Total	Cured	Local Recurrence
Lip lesion		7 = 61%		1	1 = 100%	
Lip and glands—		10 = 85%		2	2 = 100%	
metastasis		6 = 60%		1	1 = 100%	
Metastasis						
Totals	41	33 = 75%	5	4	3 = 75%	1

This table shows that any previous treatment of the little lesion on the lip which is not effectual reduces the chances of a cure from a later proper operation from 75 to 33 per cent.

In cancer of the lip the glands of the neck beneath the jaw should always be thoroughly removed. The probability of their involvement is at least 36 per cent.

We know that X ray has no effect on metastatic glands in the neck and we have no data to indicate that radium will be any more effectual. Therefore granting that X ray or radium may now and then cure the lesion on the lip the patient still runs the risk of metastasis to the glands. It is therefore a very dangerous treatment to employ X ray and radium for any operable cancer of the lip.

Of the 18 cases of malignant warts which are not included in the above table 17 have been cured 15 of these are five-year cases.

Table Showing the Duration of the Disease in Lesions of the Lower Lip Before Operation

	Cases
Less than 3 months	
3 to 6 months	18
6 to 9 months	7
9 to 12 months	17
12 to 18 months	11
18 months to 2 years	3
2 to 3 years	19
3 years and over	5
Total of cases	70

This table shows the necessity of a propaganda of education. In only 11 or 7 per cent of cases have patients sought advice for the little lesion on the lower lip at the most favorable period — within the first three months of its existence. There is really no necessity for the delay of even three months because within this period metastasis to glands has taken place in 11 cases, one of which has been cured.

Of these 11 patients 10 or 91 per cent are well.

The lesions in these 11 cases were as follows: 3 benign — all well; 3 malignant warts — both cured; 6 fully developed cancers — in 4 of these the glands showed no metastasis, and these patients are well; in 2 the glands showed metastasis — the patient whose glands were removed at the first operation is well.

In the second patient the glands were not removed as they should have been at the first operation, and this patient died of cancer of the glands of the neck.

The per cent of cures therefore in the 6 cases of cancer in which the lesion had been present 3 months or less is 83 per cent as compared with the average of 75 per cent in all cases. The per cent of cures in the 4 cases of cancer without metastasis to the glands is 100 per cent as compared with 95 per cent in all cases without metastasis to the glands.

Had the glands been removed at the primary operation in this one case the chances are that the per cent of cures in this group would be 100 per cent.

This gives the facts in a nutshell. Patients with little lesions of the lip who submit to the simple operation at least within three months of noticing the lesion should have 100 per cent chances of a cure if the surgery is thorough. We have no available evidence that any other method of treatment produces results which can compare with these.

The two factors over which we have control are the duration of the disease and the treatment. It should not be a difficult matter to educate the public to both.

The etiological factors in cancer of the lower lip are Burns from smoking wounds from teeth irritation from carrying nails and other foreign material between the lips unhealed fever blisters, cracks and chaps. The little lesion can always be immediately seen and felt. Pain is usually absent. When the lesion is first observed smoking should cease the teeth should be put in order the habit of biting the lips or carrying foreign material between them corrected the little lesion should never be touched with caustics or picked. If it does not heal within three weeks it should be excised. This can be done under local anesthesia without pain or mutilation. The lesion should be excised with a good margin of healthy tissue and subjected to microscopic examination because it is possible that cancer may have developed even within one month although this is very unusual.

If cancer has developed the glands of the neck must be removed.

When this rule is followed in every case no one should fear cancer of the lower lip. There will be no mutilation and even the danger of the operation on the glands in the hands of a competent surgeon is negligible.

*Dural P. Preservation of the Upper Branches of the Facial in the Total Removal of the Parotid for Other Diseases than Cancer (Conservation des rameaux supérieurs du facial dans l'extirpation totale de la parotide en d'hors du cancer). Rev de chir 19 4 15 3. By Journal de Chirurgie.*

The surgeon oftentimes performs a limited operation in removing tumors of the parotid gland because of the fear of facial paralysis. It is only the eye complications that are of any real importance so that if the branches supplying the eye can be avoided the extirpation can be made more radical and recur

rence more surely avoided Duval has succeeded in doing this in two cases

The facial nerve penetrates the gland dividing it into two layers the lower one of which is very thin The facial should be found at its exit from the skull and the upper (fronto-palpebral) branch followed to the posterior superior angle of the parotid To do this it is necessary to section the mastoid and sectioning the posterior belly of the digastric makes it easier to find the nerve and pass behind and below the deep lobe of the gland The cervicofacial branch is cut at its origin and also some of the lower fibers of the upper branch only those fibers being spared which control the eye It is then easy to displace these fibers upward and to draw downward the thin layer of the gland that lies below the nerve This is seized with forceps and drawn downward and forward with the rest of the gland J OBERVY

Vincent E. Treatment of Fractures of the Base of the Skull by Early and Systematic Trephining with Opening of the Dura Mater and Meningeal Drainage (D traitement des fractures de la base du crâne par la trépanation précoce et systématique avec ouverture de la dure-mère et drainage méningé) *Rev. méd. d'Alger* 1913 2

By Journal de Chirurgie

Vincent who has previously published his ideas as to preventive systematic trephining in fractures of the skull now reports 15 new cases operated on only four of which ended in death With the 8 cases of recovery published previously he now has 23 cases with 4 deaths The deaths have always followed the traumatism very quickly being due to cranial dislocation severe injury to the brain or contusion of the medulla

It is impossible to cure all patients who have fracture of the base of the skull there are injuries to the nervous system that make death inevitable whatever the treatment There must therefore be some mortality but Vincent's statistics show that where the injury to the brain is not irreparable this treatment brings recovery The best proof of this is that the patients who survive the first accident do not die miserably as they formerly did after 8 to 10 days from meningo-encephalitis because the operation overcomes hypertension and avoids infection Leaving out the 4 cases where death was inevitable there remain 9 cases of recovery after trephining Vincent maintains that this number of successful cases without meningo-encephalitis shows that the rational treatment by early and systematic trephining with meningeal drainage should be continued until statistics are produced to show that fractures of the base of the skull can be cured by simple lumbar puncture or by the expectant treatment J DUBOIS

Tooth, H. H. The Indications for Surgical Treatment in Intracranial Tumor *Practitioner* London 94 221 487 By Surg. Gyec. & Obst.

In analyzing 497 cases of brain tumor with a view of determining what the average survival

period was they were found to fall naturally into those with and those without post mortem verification They may be viewed from the standpoint of situation and nature of growth but all consideration of inaccessible tumors and tumors of the pituitary body have been omitted

Forebrain tumors offer no serious surgical difficulty as to site the casualties being common to extensive removal of bone in any part of the cranial cavity Of 161 forebrain operations, 21 per cent died within 30 days nearly half of these within 24 hours Of the tumors that may be removed with some degree of assurance that recurrence will not result are the endotheliomata simple cysts, gliomata and a few of the gliomata The endotheliomata are the most favorable and of 15 cases in the frontal region 8 made good recoveries and 6 of them are alive and well to date 4 to 10 years after the average survival period being higher than for any other class of new growth

Sarcomata and carcinomata are only suitable for a decompression operation while even tubercular culomata cannot be treated surgically without grave risk of tuberculous meningitis The survival period in the operated gliomata cases averaged only 12 7 months from operation as compared with those running a natural course from first symptom to death at 10 1 months Of 37 cases only 4 are known to be alive The high mortality is due mainly to recurrences and even though a successful removal undoubtedly affords relief it must be remembered that the partial removal of an innocent type of glioma may result in a phase of activity very acute and more obviously malignant than the original growth Decompression and exploration in the forebrain show a mortality even higher than that of the radical treatment but this result affords no criterion of the value of decompression as compared to the radical operation as the former have mostly been performed upon the worst cases or have been two stage operations the patient not surviving the first stage

The results of operations on the cerebellum are generally unsatisfactory the gross mortality being in favor of decompression and against the radical treatment

The results of surgical treatment of the extra cerebellar group are disappointing in the extreme These non-infiltrating almost innocent tumors should lend themselves most successfully to operation while the position of the tumor pressing on the medulla renders operative interference imperative But sudden relief of pressure upon the vital centers is followed by oedema increased vascularity and probably hemorrhage The most that seems justifiable is to relieve pressure by free craniotomy followed by decompression after as long an interval as possible

The conditions which indicate the necessity for immediate relief whether localization has been made or not are referable to rise of intracranial pressure and suggest either a rapid phase of growth with

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The period 1903 represents 19 years — from 1889 the period 1913 — five years.

Table of Per Cent of Cures in the Operable Cases of Cancer Up to 1908

Excision of	Primary			Recurred		
	Total	Cured	Local Recurrence	Total	Cured	Local Recurrence
Lip lesion	1	70-63%	—	5	—	—
Lip and glands	1	—	—	5	—	—
Metastasis	1	60-50%	—	5	50%	—
Total	44	31-75%	5	5	5	0

This table shows that any previous treatment of the little lesion on the lip which is not effectual reduces the chances of a cure from a later proper operation from 75 to 33 per cent.

In cancer of the lip the glands of the neck beneath the jaw should always be thoroughly removed. The probability of their involvement is at least 36 per cent.

We know that X ray has no effect on metastatic glands in the neck, and we have no data to indicate that radium will be any more effectual. Therefore granting that X ray or radium may now and then cure the lesion on the lip, the patient still runs the risk of metastasis to the glands. It is therefore a very dangerous treatment to employ X ray and radium for any operable cancer of the lip.

Of the 18 cases of malignant warts which are not included in the above table 17 have been cured 15 of these are five-year cases.

Table Showing the Duration of the Disease in Lesions of the Lower Lip Before Operation

	Cases
Less than 3 months	1
3 to 6 months	1
6 to 9 months	1
9 to 12 months	1
12 to 18 months	1
18 months to 2 years	1
2 to 3 years	1
3 to 5 years	1
5 years and over	1
Total of cases	10

This table shows the necessity of a propaganda of education. In only 11 or 7 per cent of cases, have patients sought advice for the little lesion on the lower lip at the most favorable period — within the first three months of its existence. There is really no necessity for the delay of even three months because with this period metastasis to glands has taken place in 2 cases one of which has been cured.

Of these 11 patients 10 or 91 per cent are well. The lesions in these 11 cases were as follows: 3 benign — all well; 3 malignant warts — both cured; 6 fully developed cancers — in 4 of these the glands showed no metastasis and these patients are well; in 2 the glands showed metastasis the patient whose glands were removed at the first operation is well.

In the second patient the glands were not removed as they should have been at the first operation and this patient died of cancer of the glands of the neck.

The per cent of cures, therefore, in the 6 cases of cancer in which the lesion had been present 3 months or less is 83 per cent as compared with the average of 75 per cent in all cases. The per cent of cures in the 4 cases of cancer without metastasis to the glands is 100 per cent as compared with 95 per cent in all cases without metastasis to the glands.

If the glands been removed at the primary operation in this one case the chances are that the per cent of cures in this group would be 100 per cent.

This gives the facts in a nutshell. Patients with little lesions of the lip who submit to the simple operation at least within three months of noticing the lesion should have 100 per cent chances of a cure if the surgery is thorough. We have no available evidence that any other method of treatment promises results which can compare with these.

The two factors over which we have control are the duration of the disease and the treatment. It should not be a difficult matter to educate the public to both.

The etiological factors in cancer of the lower lip are: Burns from smoking wounds from teeth irritation from carrying nails and other foreign material between the lips which led to fever blisters, cracks, and chaps. The little lesion can always be immediately seen and felt. Pain is usually absent. When the lesion is first observed smoking should cease the teeth should be put in order the habit of biting the lips or carrying foreign material between them corrected the little lesion should never be touched with caustics or picked. If it does not heal within three weeks it should be excised. This can be done under local anesthesia without pain or mutilation. The lesion should be excised with a good margin of healthy tissue and subjected to microscopic examination because it is possible that cancer may have developed even within one month although this is very unusual.

If cancer has developed the glands of the neck must be removed.

When this rule is followed in every case no one should fear cancer of the lower lip. There will be no mutilation and even the danger of the operation on the glands in the hands of a competent surgeon is negligible.

Duval P. Preservation of the Upper Branches of the Facial in the Total Removal of the Parotid for Other Diseases than Cancer (Conservation des branches supérieures du facial dans l'extirpation totale de la parotide hors du cancer). *Rev. de chir.* 914 12 32. *Bj. Journal de Chirurgie*

The surgeon often performs a limited operation in removing tumors of the parotid gland because of the fear of facial paralysis. It is only the eye complications that are of any real importance so that if the branches supplying the eye can be avoided the extirpation can be made more radical and recur.

that the language zone was on the left side in right handed people and that it occupied all the convolutions around the fissure of Sylvius except the foot of the frontal and the ascending parietal and that it comprised two parts the posterior one Wernicke's zone was the center of verbal deafness — first temporal — and of verbal blindness the anterior one composed practically of the foot of the third frontal was Broca's language center In pathology sensory aphasia was held to be due to a lesion of Wernicke's zone and motor aphasia to a lesion of Broca's center

Total aphasia implied destruction of all the language zone Marie and Monnier agree that sensory aphasia is really due to a lesion of Wernicke's zone but they hold that motor aphasia cannot be considered a lesion of the third frontal They do not believe that the language center as described by Broca exists Motor aphasia results from a lesion of the lenticular zone a region comprising the lenticular nucleus and the convolutions of the island The lenticular nucleus is a center of coordination motor aphasia is a lack of coordination However the difference in the two anatomical conceptions does not make any great difference in the surgical procedure

Froment gives the following rule for surgeons Motor aphasia which affects the spoken and written word is due to a lesion situated more anteriorly than that for sensory aphasia In a patient with aphasia a trephine should be made in the region corresponding to the island more especially its anterior extremity The opening can then be prolonged forward or backward depending on the lesions found

G. CORRE

Lawroff W: Repairing Defects in the Dura by Transplantation of Fascia (Zur Frage des Ersatzes von Duraldefekten durch Transplantation von Fascia) *Berliner Klin. Wochenschrift* 1914 LXXIX 466 By *Journal de Chirurgie*

In 1913 Kirschner described 46 cases in which a defect in the dura was covered with transplanted fascia the author adds 23 more cases from the literature and 4 new cases from the Obukhovich Hospital at St. Petersburg In 2 of these cases the brain symptoms appeared a long time after the skull fracture In one case they were caused by a splinter of bone in the other by adhesions between the surface of the brain and the skin which followed an earlier operation for brain abscess In both cases the defect was covered by fascia — fascia lata and fascia from the back In both cases after the operation there were no further brain symptoms

In the two other cases the skull fractures were recent In the first case the brain substance had prolapsed the defect in the dura was covered with fascia No attacks followed the operation In the second case there was also prolapse of the brain The dura defect was covered with fascia Five days after the operation epileptoid attacks occurred and as a hematoma was discovered under the trans-

planted fascia it was removed For a while there were no more attacks but three and one-half months later the patient appeared again as the attacks had recurred

The course of this latter case caused the author to give up the use of fascia for covering defects in the dura in fresh fractures of the skull From the published cases as well as from extensive experimental work the author expresses the belief that fascia is an excellent material for covering defects in the dura the fascia takes well and without reaction closes the subdural space hermetically and hinders not only the entrance of infective material from without but the escape of brain substance It also prevents hernia of the brain But adhesions between the transplanted fascia and the brain substance are not always avoided The formation of these adhesions is often explained by injuries to the brain during the operation but adhesions are sometimes formed when there has been no injury to the brain whatever

VON HOLST

Diller T and Miller R T: The Successful Removal of a Tumor from the Frontal Region of the Brain *Am. J. W. Sc.* 1914 CXI 11 550 By *Surg. Gynec. & Obst.*

The first symptoms of the case were twitching movements in the epigastric region After a time these also appeared in the left hand and arm later the arm and left leg became weak The patient was that of pure Jacksonian epilepsy in an otherwise healthy woman of 53 years

The operation was accomplished in two stages At the first operation the tumor was located just anterior to the upper portion of the motor cortex and extended up to the mid longitudinal sulcus but on account of shock from loss of blood a closure was made At a subsequent operation a few days later a tumor measuring 4.5 x 3.5 x 3 cm was enucleated

The tumor was encapsulated and was diagnosed as a hamangioma-endothelioma

Following the second operation the patient was paralyzed in the left arm face and leg From this she subsequently recovered and both arms and legs rapidly became stronger

EUGENE CARY

Walther M: Dermoid Cyst of the Inion (Kyste dermoïde del inion) *Bull. de l'Acad. de med.* 914 LXX 335 By *Journal de Chirurgie*

Walther has operated on two dermoid cysts of the inion The first case was published in 1895 after having been presented before the Surgical Congress in 1893 A man of 34 had a fistula at the occipital protuberance following the removal of an extracranial cyst This fistula penetrated the skull and opened into a large intracranial cavity The author made an extensive resection of the occipital bone and exposed the entire intracranial cavity which was dermoid in character He could not dissect the wall of the cyst which was very thin It has been 21 years since the operation and the patient has never had any cerebral symptoms

or an internal hydrocephalus. These are (1) increasing swelling of the optic disc (2) the grosser form of optic neuritis particularly if there is a diminution of visual acuity, (3) increasing drowsiness slow cerebration and other mental states (4) respiratory distress or disturbance of respiratory rhythm (5) increase in the severity or frequency of convulsions or deepening paralysis (6) unbearable headache.

It is usual to operate in two or more stages according to circumstances. The first stage is the craniectomy with removal of ample bone or its retention as an osteoplastic flap, suturing of the skin completing the first step. The degree of intracranial pressure may be gauged by the amount of pressure and an idea of the consistency may be gauged by the touch. The site of operation will be determined by the localizing symptoms but in the absence of these craniectomy is best performed over the right parietal region. The larger number of fatalities occurred at any time from immediately to 14 days after. Most of them were due to shock, respiratory or heart failure. These dangers are most to be feared in the extracerebellar group less in the intracerebellar still less in the frontal and temporal and least in the central region.

The sequel of the first stage is often marked improvement, dullness and drowsiness rapidly disappearing, headache ceasing, convulsions becoming less frequent and paralysis even lessening. The best evidence of the lasting relief of pressure is the improved condition of the optic discs which may vanish in a week. On the other hand, no relief may follow and it becomes necessary to give further relief by decompression or in special cases by radical removal of the tumor.

The second stage implies reopening of the skin flap and incision of the dura. This is the critical moment in which the decision must be made whether to leave matters as they are or to attempt removal of the tumor. If viable and highly vascular its margins ill-defined its consistency soft it is almost sure to be a rapidly growing glioma or other malignant tumor and is best left alone. If it is non vascular perhaps cystic it again may be glioma but quiescent, and should also be left alone as removal will surely be followed by malignant activity. If the growth is firm and sharply delimited it is almost certainly an endothelioma and can be removed with safety. If the tumor can be felt but not seen it indicates a subcortical growth practically certain to be a glioma and should not be touched but it is permissible to tap a glomatous cyst.

Post-operative shock is generally less frequent after the second stage and the mortality is proportionately low. Slight sepsis of the flap is a serious danger and septic meningitis claims many. The future course of the case depends upon the behavior of the tumor itself. If it continues to enlarge or recurs large hernial protrusions result, with perhaps a return of all former symptoms and the patient lapses into a vegetative existence until death. In

the more favorable cases the patients lead useful lives, with little more than the discomfort of the hernia for a term of years. E. K. ARMSTRONG

Thorburn W. Address on the Present Position of Cerebral Surgery. *Med. Chronicle* 1914, 4, 141. By Surg. Gynec. & Obst.

The author attempts to arrive at some general conclusions as to the final results of surgical interference in epilepsy and cerebral tumors. In considering epilepsy it must be remembered that almost any operation may produce a temporary arrest of symptoms and one must thus be certain that when a direct attack upon the probable focus of disease appears to have cured it, one is not misled by a mere lull in the symptoms. Cushing's figures on 58 cases are quoted with 20 per cent of recurrences and 51 per cent improved. Rawlings refers to 30 cases 10 per cent being cured and 70 per cent markedly improved.

The author's series consists of 19 cases which he has followed for at least two years. Of these 5 are completely cured and 6 greatly improved or in other words over a quarter have been successfully operated. The author advises that operation be limited absolutely to traumatic cases with a definite cranial lesion or focal symptoms, as he has never seen any benefit from operation for idiopathic epilepsy. Commonly adhesions of the dura to the skull or of the cortex to the dura are found sometimes bony spicules, an osteitis, or cysts. He has never had any trouble with the cranial defect and never had to use any artificial covering.

Four hundred and ninety cases of cerebral tumor are tabulated and from these figures it may be assumed that operation was of little or no value or may have hastened the end in 37.9 per cent while it has probably saved or greatly prolonged life in 23.6 per cent. In 38.3 per cent its value was doubtful. While a cure of less than 25 per cent is not very encouraging, it must be remembered that the great majority of cerebral tumors are malignant and thus we are driven to the position that with our present resources cerebral surgery has to aim not so much at the cure of malignant disease as to the prolongation of life, the prevention of blindness and of intense headache. As in the case of epilepsy mere exposure of the cerebral cortex is almost free from risk whereas deep operations upon the brain substance become very fatal, the dangers of exploration being as great when the growth is not found. Early decompression is advised in every case of cerebral tumor while anything else that may be done must be left to the opportunities of the moment in favorable cases. E. K. ARMSTRONG

Froment. Cerebral Surgery and Recent Discussions on Aphasia (*La chirurgie cérébrale et les discussions récentes sur l'aphasie*). *Lyon méd.* 1914, 12, 663. By Journal de Chirurgie.

Before the work of Marie and the discussions before the Neurological Society (1908) it was held

Antithyroid serum thyrodoctin and rodagén are all very expensive remedies and the author has not been favorably impressed with their value. Belladonna, digitalis, and the X rays have occasionally been found useful.

The injection of adrenalin solution 1:1000 into the pleural cavity prevents the reaccumulation of fluid after tapping but it also favors the formation of adhesions. The author prevents this by injecting filtered air and paraffin. This permits the whole of the fluid to be drawn off without discomfort and prevents the rapid spread of mischief in tuberculous pleurisy. Though the secretions of the suprarenal and pituitary glands cannot be regulated, the high pressure effects which they produce can be controlled and furthermore the secretion of the thyroid gland can be stimulated or decreased by their use.

In the majority of cases Addison's disease is due to caseation of tuberculous origin which is not amenable to tuberculin treatment. The administration of adrenalin is of very little use in this condition as it is readily oxidized and cannot be universally distributed to all the sympathetic nerves. To get a widely distributed effect it is best given very dilute with a large quantity of hypertonic sodium and calcium chloride solution.

Excessive activity of the anterior lobe of the pituitary gland results in gigantism if occurring in early life. Later in life it results in acromegaly. This excess function is associated with increased sexuality in the male and amenorrhoea in the female. Excessive action of the infundibular leads to increased metabolism and carbohydrate intolerance. The extract of this portion of the gland has a marvelous effect in producing contraction of the intestine and uterus and thus is very useful in paresis of the bowel and in the so-called sapræmia following parturition in the latter shutting out further absorption. In diphtheria a combination of pituitary extract, adrenalin and a calcium salt is useful in rectifying low blood pressure and dilated heart, neurasthenia with dilated stomach and cold extremities is often benefited.

Defective action of the anterior lobe is associated with infantilism and if there is an associated hypothyroidism there may be also a cretinoid condition. Infundibular insufficiency is accompanied by great carbohydrate tolerance and low blood pressure associated with such conditions as dystrophia adiposa genitalis or adiposa dolorosa. Treatment of these cases is easily regulated by observation of the blood pressure and by the freedom of the urine from sugar.

E. K. ARMSTRONG

## SURGERY OF THE CHEST

### CHEST WALL AND BREAST

Quénu E. Early Involvement of the Glands in Cancer of the Breast (*De l'adénopathie précoce dans le cancer du sein*) *Bull. med.* 1913, xlviii, 1039. By *Journal de Chirurgie*.

The axillary glands into which the lymphatics of the breast flow are invaded in cancer of the breast by colonies of cells from the mammary tumor. Surgeons have been trying for a long time to settle the question of the time at which this invasion takes place. As early as 1888 Delbet found from a study of the statistics and his own cases that in general the involvement of the glands is very early and that it exists before it is clinically demonstrable.

In the present article Quénu shows by two of his own cases that involvement of the glands may precede the initial nodule of the breast, that is that the glands may be easily palpable while the mammary nodule is still so small and insignificant as to escape detection or at least be doubtful. Clinically the glandular involvement comes first while the mammary lesion remains uncertain. Thus involvement of the glands of the axilla is not only early but it is the sign which reveals mammary cancer.

The practical conclusion to be drawn is that an affection of the axillary glands hard in consistency should be an object of suspicion if it is observed about the age of 45 and if nothing in the general condition or the neighboring tissues gives a satis-

factory explanation of it. The same course should be taken as in a doubtful cancer of the breast; uncertainty is not permissible.

J. DUMONT

Nathan M. Early Diagnosis of a Neoplasm of the Breast by the Histological Examination of the Hemorrhagic Discharge (*Diagnostic précoce d'un néoplasme du sein par l'examen histologique de son suintement hémorragique*) *Ci. chirurg.* 1914, 38. By *Journal de Chirurgie*.

Mintz recently called attention to certain neoplasms of the breast the symptoms of which were limited for years to a bloody discharge from the nipple. Nathan recently had a case of this kind and he was able to make the diagnosis by the histological examination of the discharge.

A woman 40 years old apparently healthy had complained for several months of a bloody discharge from the left nipple. She had nursed several children, the last one 15 years before but an abundant milk secretion had kept up since that time. By pressure on a certain point on the breast a brownish liquid was discharged resembling in color the hemorrhagic effusion in cancer of the pleura. Examination of the nipple and palpation of the breast did not show any tumor. The axilla was free of glands. In spite of the negative symptoms the most probable diagnosis seemed to be cancer of the breast. Microscopic examination of the fluid confirmed this diagnosis, showing the presence of

The second case not previously published was in a child of three. It had an ulcer a centimeter in diameter at the incision following the incision of a swelling which appeared to be a cold abscess. Below the orifice there was a deep swelling which extended under the upper insertions of the muscles of the nape of the neck. Upon operation after the fistula and the adjacent cavity were curetted it was found that this cavity communicated through a tolerably large opening with another intracranial cavity. A granular mass was dissected the size of a small nut made up of small lobulated tumors with grayish contents and fibrous nodules which was located at the upper insertion of the muscles of the nape of the neck. An extensive resection of the occiput was then made exposing the intracranial pocket which was located superficially between the cerebellum and the occipital bone. The cavity was lined with a very thin smooth membrane which it was impossible to separate from the dura mater. Healing took place by second intention. Histological examination showed that the wall was dermoid in nature but without either hairs or glands. The extracranial tumor was made up of fibrous masses which had undergone angiomatous change in places. The patient when seen again thirteen years later showed a smooth slightly depressed scar. Touching it caused a disagreeable sensation with irradiation to the thorax and a sensation of nausea.

These two cases seem to confirm Lannelongue's theory of inclusion. The immediate and late results in these two cases show that it is possible to limit operation to extensive resection of the bony wall of the cystic cavity leaving open the dermoid pocket the edges of which unite with the cutaneous scar.

CHICAGO, I.

**Camus, J and Roussay G. Hypophysectomy and Experimental Glycosuria (Hypophysectomie et glycosurie expérimentales). Compt rend Soc de Biol Par 1914 1 vi 99** By Journal de Chirurgie

In a preceding note the authors made an experimental study of polyuria and polydipsia appearing after operations on the hypophysis. In this note they take up the question of glycosuria under the same conditions. They made a systematic study of the sugar in the urine of dogs before and after operation which there were lesions or destruction of the hypophysis or the neighboring part of the brain. Their results were as follows: Absence of glycosuria in 30 cases of lesions or destruction of the hypophysis. Absence of glycosuria also in 9 cases of lesions of the base of the brain in the region of the hypophysis. Positive glycosuria in 6 cases of lesion or destruction of the hypophysis or neighboring parts of the brain. This shows that glycosuria is an unusual phenomenon after operation on the hypophysis or neighboring parts. There were only 6 positive cases out of 45. Moreover it is only temporary. Glycosuria is not always associated with polyuria which is more constant.

The authors believe that glycosuria after hypo-

physectomy is only a chance incident like other post operative glycosurias. It seems to depend less on partial or total suppression of the hypophysis than on injury of the nervous centers of the region, as is shown by the group of four positive cases out of six where there was a lesion at the base of the brain sufficient to provoke glycosuria.

# NECK

**Barr J: On the Functions of the Thyroid the Suprarenal and the Pituitary Glands. Proc 1st Int Lond 1914 xxi 457**

By Surg Gynec. & Obst

As a result of the attention bestowed upon the ductless glands there are now some potent and extremely useful remedies but a clear conception of the suitability of thyroid, suprarenal and pituitary extracts should be had before they are used.

Thyroid inadequacy was designated by Ord as myxodema. It is about seven times more common in women than men probably because overaction which is so common in females is apt to be followed by lessened function. In males the thyroid is less active but the pituitary and suprarenal glands are much more so hence the blood pressure is higher there is more retention of calcium salts and arteriosclerosis occurs earlier. Thyroid has proved of value in the incontinence of urine in children, in the troublesome micturition of the aged in mastodynia and in cases of large prostate. Thyroid is of importance whenever one wishes to increase calcium metabolism hence its value in arteriosclerosis and hyperplastic conditions.

There are an enormous number of cases of hyperthyroidism without exophthalmos enlargement of the gland or marked nervous symptoms but one may observe emotional and somotor disturbances a warm moist skin active capillary circulation high venous pressure rapid heart action increased reflexes, and even a slight muscular tremor. The urine may contain albumin and is associated with lessened amount of fixed lime in the blood. In many cases there is an accompanying diminished action of the suprarenals with skin pigmentation and low blood pressure. This increases the gravity though the symptoms are not more marked there being less cardiac stimulation and less palpitation. In hyperthyroidism there is a great difference between the systolic and diastolic pressures, which means an inefficient circulation and it is for this reason that suprarenal extract plays such an important part. Barr believes that the soluble salts of calcium combined with adrenalin constitute the best remedy for this disease. Suprarenal and pituitary secretions help retain the lime salts in the tissues but the latter should only be used when the blood pressure is low and one believes the suprarenals to be inactive. As the improvement advances there may be found too much lime in the blood and tissues with a slow irregular heart action. In that case nitrate should be lessened and elimination hastened with citric acid.

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Excessive activity of the anterior lobe of the pituitary gland results in gigantism if occurring in early life. Later in life it results in acromegaly. This excess function is associated with increased sexuality in the male and amenorrhoea in the female. Excessive action of the infundibular leads to increased metabolism and carbohydrate intolerance. The extract of this portion of the gland has a marvelous effect in producing contraction of the intestine and uterus and thus is very useful in paresis of the bowel and in the so-called sapraemia following parturition in the latter shutting out further absorption. In diphtheria a combination of pituitary extract, adrenalin and a calcium salt is useful in rectifying low blood pressure and dilated heart, neurasthenia with dilated stomach and cold extremities is often benefited.

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In the present article Quénu shows by two of his own cases that involvement of the glands may precede the initial nodule of the breast, that is, that the glands may be easily palpable while the mammary nodule is still so small and insignificant as to escape detection or at least be doubtful. Clinically the glandular involvement comes first while the mammary lesion remains uncertain. Thus involvement of the glands of the axilla is not only early but it is the sign which reveals mammary cancer.

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abundant large and small polymorphous cells isolated or in groups. There was no doubt of their neoplastic origin.

These early bloody discharges are characteristic of intracanalicular papillary epitheliomas; their point of origin seems to be the galactophorous ducts.

The above case presents the unique point of having originated in a gland with abnormally prolonged activity. The theory of cellular metaplasia is supported by this fact. The practical conclusion to be drawn from the case is the possibility of early cytological diagnosis.

J. DEVOIR

**Mercadé** 9: Tuberculosis of the Costal Cartilages (Tuberculosis des cartilages costaux) *J. d. M.* 1914 XII 139. By Burg. Gynec. & Obst.

It has been generally held that tubercular abscesses of the wall of the thorax originate in the bone; that there was no such thing as primary tuberculosis of the cartilages. Mercadé reports six cases in which there were tuberculous abscesses originating in the costal cartilages. The patients were men between 45 and 60 and one woman of 25. The abscess did not develop downward but worked forward through the intercostal spaces between the muscle fibers.

The cases were successfully operated on by the following technique:

1. In the first step it is absolutely necessary that the whole extent of the lesion be exposed; therefore a skin flap should be traced large enough to take in the whole affected area. The point of origin of the lesion should be determined by pain on pressure. This should be the base of the flap. The incision should be begun in healthy skin and carried around the abscess 2 or 3 cm from it and come up on the other side parallel to the first line. If instead of an abscess there is a fistula, its direction should be determined by a sound and the flap traced around it with the base perpendicular to its point of origin. If it becomes necessary to enlarge the flap the incision can be prolonged. The flap should then be dissected. In doing this, two things should be avoided—opening the abscess and perforating the skin. If the skin is adherent to the wall of the abscess it is better to open the abscess, protecting the neighboring tissues and leaving the fragment adherent to the skin rather than to perforate the skin in the attempt to dissect it or thin it to such an extent that it will be perforated by gangrene later. The dissection should be continued beyond the adherent zone which should be curetted, irrigated and cauterized with zinc chloride. When the flap is completely dissected it should be turned back on its base and covered with sterile dressings.

2. The second step consists of extirpation of the pocket of the abscess or fistula. In opening the abscess every precaution should be taken to protect the neighboring parts. It is best to open it with a large trocar and draw the pocket with compresses. The abscess should then be flowed up until the original lesion is discovered. If it is a fistula a

sound in its lumen should guide the dissection. If the skin flap is not extensive enough it should be uncovered and the lateral incisions prolonged as far as necessary and the flap dissected farther with the same care as before.

3. The third step is resection of the cartilage. The lesion having been found the cartilage should be incised with a bistoury from before backward at a distance of 1 or 2 cm on each end of it. When the fragment is separated it should be lifted carefully with the fingers, not with forceps which might crush the cartilage and injure the pleura. If several cartilages are affected they should be removed separately, sparing the costal arch, but if the costal arch is itself involved it should be removed, the piece to be removed being separated with the bistoury in each case before it is lifted up from the underlying tissues. The underlying tissues should be examined carefully and any suspected point removed even if it is pleura. If the pleura is opened by design or accident the thorax should be compressed above the point and the pleura sutured with catgut.

4. Closure and drainage of the wound comprises the fourth step. A drain should be left for two days either at the angle of the incision or through an orifice made in the flap. Care must be taken to avoid a dead space in closing the wound. It is generally sufficient after having sutured the skin to apply a tampon of gauze which will exert sufficient pressure to produce the desired result. If necessary a few sutures may fix the skin flap to the floor of the wound. They must be applied with care remembering the nearness of the pleura.

If the abscess is in the abdominal wall especially under the rectus which is the place to which it migrates most frequently it is necessary to section the muscle.

After the operation, if the operation requires the cutting into bone tissue there will be a discharge first of blood and then of serous fluid. After the removal of the drain the dressing should be changed every two days to see if there is a discharge. If there is the top of the flap can be separated a little between two sutures and the fluid squeezed out and the wound released. This seldom required more than once or twice at most.

A. Goss

**Potel** 1: Sarcoma of the Scapula. Partial Resection of the Scapula with Preservation of the Shoulder-Joint. Good Function. Result Two and One-Half Years after the Operation (Sarcome du scapulaire. Résection économique de l'omoplate avec conservation de l'articulation de l'épaule. Bon résultat fonctionnel 2 ans et demi après l'intervention). *Bull. et mém. soc. de chir. Par.* 1913 XII 358. By Journal de Chirurgie.

The case reported was a sarcoma with fusiform cells about 7 cm in diameter that had involved almost the whole scapula and the attached muscles and which Potel, contrary to the usual practice treated by partial scapulectomy sparing the whole shoulder joint. This course seems to have been justified by the results for at present—two and

one half years after the operation—the patient has had no recurrence and has complete movement of the arm

QUEZAR believes in preserving the glenoid fossa and if this is impossible he thinks it best to fix the head of the humerus at the external end of the clavicle

BROCA performed extensive resection for a myeloplaxoma of the pine of the scapula. These tumors can be differentiated from the osteosarcoma by their clinical course as well as by the radiographic picture. They develop slowly and in the radiographic picture are easily distinguished from the bone and neighboring soft parts by their uniform gray color. They should be simply excised when the region permits; otherwise they should be curetted out without its being necessary to fill up the cavity or perform a bone graft as Delbet, Walther and others have advised.

WALTHER said that in a case of resection of the radius for myeloplaxoma with bone graft recovery had been greatly hastened by the graft. As to small cell sarcoma he had only seen one case of recovery after partial resection, a case in the alveolar border of the jaw where in spite of the limited resection there had been no recurrence more than two years after the operation.

DELBET finds that filling up the cavity left by the removal of bone has considerable advantage. These cavities are painful to the patient; they suppurate; every dressing is torture and they have to be dressed often. After they are filled they only need to be dressed rarely and the patients no longer suffer.

SAVARIACQ agrees with Delbet that it is much preferable to fill the cavities. J. DE MOY

Hirano, T. Transplantation of Fascia to Cover Defects in the Wall of the Thorax (Die freie Fascientransplantation zur Deckung von Thoraxwunden). *B. M. Ch.* 913, 1938. By Zentrabl. d. ges. Ch. u. Grenzgeb.

The author describes experimental attempts to replace defects in the wall of the thorax in such a way as to give sufficient firmness to prevent hernia of the lung and to avoid adhesions of its surface.

Transplanted fascia lata was used in rabbits and dogs. In order to prevent adhesions of the surface of the lung to the transplant a partial pneumothorax was left or induced by the introduction of a trocar. Five experiments were made. In 8 of them there was infection but in spite of that fact the transplant took in the 7 aseptic cases the fascia lived in the histological sense. There was complete lack of lung adhesions in 3 aseptic cases and in infected rabbit case and only slight adhesion in infected and aseptic cases in rabbits. There were broad superficial adhesions in two aseptic cases in dogs.

The pleural endothelium had covered the internal surface of the transplant in a specimen 7 days old and in a specimen 54 days old there was almost normal pleural formation.

In this method therefore adhesions of the lung can be avoided if the course is aseptic and if by pneumothorax the surface of the lung is kept from coming in contact with the transplant till the pleural endothelium has covered its internal surface.

IZELLER

Lenormant C. Chondrectomy to Mobilize the Chest Wall in Deformity of the Thorax (La chondrectomie mobilisatrice dans les déformités thoraciques accompagnées de troubles respiratoires). *J. de Ch. P.* 1914, XI, 245.

By Surg. Gynec. & Obst.

Freund believed that in tuberculosis and emphysema of the lungs the deformity of the thorax is often the cause rather than the result of the pulmonary disease and therefore recommended resection of the costal cartilages in the treatment. This has not proved practicable in tuberculosis because it is of no benefit except in such an early stage that medical treatment is effective in emphysema; however the operation has been performed about a hundred times with excellent results.

There are other deformities of the thorax however in which Lenormant believes the operation would be effective such as those of scoliosis, rickets, ankylosis of the vertebrae and in the rather unusual congenital funnel-shaped chest when it is so marked as to cause displacement of the heart and difficulty in respiration. He cites only four cases in which the operation has been performed for these reasons. In two of the cases there was pigeon breast as the result of rickets with considerable shortening of the transverse diameter and both patients had typical asthmatic attacks with more or less disturbance of respiration during the intervals. One patient had a congenital funnel-shaped thorax with shortening of the antero-posterior diameter and one was a case of ankylosis of the vertebrae with flattening of the thorax. The two latter suffered from continual dyspnoea without any paroxysmal attacks. In all of them the thorax was so rigid that respiration took place only by the movements of the diaphragm.

The technique of resecting the costal cartilages is so simple that it does not need description. The only question seems to be as to how many should be resected and whether the operation should be unilateral or bilateral. The author believes the resection should be extensive and contrasts the partial success in Meyer's case who resected only two cartilages with the brilliant results in Klapp's case where the cartilages from the second to the eighth inclusive on both sides were resected. In all the cases the immediate results were satisfactory; mobility of the ribs became apparent on the operating table and there was improvement in respiration and disappearance or decrease in the dyspnoea.

The late results in Meyer's case are not known. In Klapp they were excellent six months after the operations and in the other two there was great permanent improvement in the general condition but the attacks of asthma continued though they

were not so frequent nor so severe as before. One of these cases was operated on a second time a pseudarthrosis being established at the sternum with marked improvement. The chief danger in the late results of the operation is the regeneration of the cartilages. In the author's own case this took place in spite of the removal of the perichondrium and interposing muscle. The best means to prevent this is to keep up respiratory gymnastic exercises and this is an essential part of the treatment. Supplemented in this way the author believes chondrectomy is of great value in deformed and rigid thorax.

A Goss

Leriche: Emphysema Treated by Freund's Operation (Emphysème traité par l'opération de Freund) *Lyon med. ann.* No. 1 28

By Journal de Chirurgie

Lenche describes a case of emphysema with a dilated rigid chest in which Freund's operation was unsuccessful and discusses the causes of this failure. The patient was a man of 61 who had had emphysema for a long time. Lenche resected the third, fourth, fifth and sixth costal cartilages, but from an error in counting the second was spared and it sufficed to keep the thorax as rigid as before. It is evident that this cartilage should also be resected which will probably produce the desired result. The interesting point is that in performing Freund's operation the cartilages must be resected until the one is found that is the key to the thorax as soon as it is resected the thoracic wall is mobilized. It is not always the same in this case and another operated upon by Lenche it was the second which seemed to control the ankylosis. In a third case it was the third and fourth.

G Corry

Uffreduzzi, O. Experimental Surgery of the Organs of the Mediastinum, Except the Heart (Contribuzione à la chirurgie expérimentale des organes du médiastin le cœur excepté) *Policlinico* Roma, 19 4 xxi 5

By Journal de Chirurgie

In spite of the brevity of this paper it is difficult to give a brief abstract of it, because of the abundance of experimental facts that it contains. These experiments aim to demonstrate the lack of danger in intratracheal insufflation anesthesia by Meltzer Auer's method and its advantages in numerous operations on the organs of the mediastinum. The author used Giordano's apparatus and his experiments were performed on more than 300 dogs with no death due to the anesthesia although some of the operations lasted more than two hours. These experimental operations clear up some points in human surgery and will serve as a basis for further research.

In collaboration with Giordano Uffreduzzi has modified Roux technique for oesophago-intestinal anastomosis in case of stenosis of the oesophagus.

The first stage is a lateral laparotomy the jejunum is sectioned 40 cm below the duodenojejunal angle the distal end of the intestine is brought for

ward and sutured to the proximal segment about 60 cm below the point of section. The trunk of the jejunum is introduced under the skin of the thorax. Through its orifice the sternal may be nourished, excluding the stomach.

The second stage consists of another laparotomy and the opening of the intestine into the stomach. The two organs are already adherent or are placed in contact in the most favorable position. After that the food may pass through the stomach or may be forced to pass, if wished, by obliterating the jejunum below the gastro-enterostomy. Only the anastomosis of the oesophagus with the jejunum remains. He operates by the thoracic route and performs an end-to-end anastomosis in the open mediastinum. The suture in two stages holds well the vitality of the segment of intestine is preserved provided it is not carried up further than a third of the thorax. This complex operation is preferable to that of Roux, there is less danger and difficulty and it is applicable even in cases of tumor of the oesophagus. The new oesophagus is in a better position to functionate because of the lack of sutures. Its chief indication is in tumors of the oesophagus situated low down.

The author then tried replacing a resected segment of the oesophagus by a sort of tube obtained by rolling up a parallelogram cut from the wall of the stomach and left adherent at its base in the lesser curvature. The tube is carried into the thorax and brought into contact with the upper end of the oesophagus to which it is sutured. A number of experiments were performed on the descending aorta in collaboration with Giordano. They found that haemostasis of this vessel by compression could be maintained for 15 minutes without any harm and for 15 with only inconsequential symptoms. Arrest of the blood for as long as 20 minutes was fatal but the most complex operation on the aorta can be performed in 12 to 14 minutes. For the end-to-end anastomosis of vessels after the resection of a segment they have devised a method superior to Carrel's as it produces a tighter suture. The two ends are united at a point on the posterior side of the vessel and inside. One of the ends of the suture is used as a continuous suture half-way round the vessel then they return to the original point take up the other end of the suture and suture the other half until the first one is met. This requires only 8 to 10 minutes the suture is absolutely watertight and does not cause stasis. Experiments on thoracic duct were performed with Rinaldi. They were struck by the seriousness of the duct they are fatal in half the cases below the lesion is recommended the duct by the thoracic route is abundant meal. It is very fragile without injury of an anastomosis is established from work surrounding the duct. If may be ligated not at the point further up at the most access.

collateral circulation is established which takes some time the wound has already cicatrized.

The pulmonary artery was utilized to perfect the technique of Trendelenburg's operation. This operation has never given any definite cures but it is logical and worth while to establish the conditions under which it may be performed. A simple intercostal incision in the third space suffices to expose the pericardium and the intrapericardial course of the aorta and the pulmonary artery. The circulation in these vessels may be interrupted by means of a rubber tube for thirty minutes without any injury a time long enough to open the pulmonary artery, extract clots and close it up again. Uffreduzzi uses a special fenestrated forceps by which it is possible to suture the edges of the vessel wound while allowing the blood to circulate. But he prefers a transverse to a longitudinal incision as it renders exploration easier and more rapid.

There is little to be said of the superior and inferior vena cava. It is known that it is always fatal to ligate them. The higher up the ligation of the inferior vena cava is the sooner death ensues. It is certain that suppression of renal or hepatic function is incompatible with life but death in such cases comes on too quickly to be attributed to anything other than a mechanical cause, the blood that flows into the heart is insufficient to produce mechanical functioning of the heart. The details furnished by intrathoracic section of the vagus nerves are less interesting. Without passing judgment on Frank's operation Uffreduzzi maintains that the intrathoracic route gives the best access to the intercostal nerves but he says he has never located the spinal ganglia by this route with certainty.

PIERRE FREDET

## TRACHEA AND LUNGS

Graser. Surgery of the Lungs and Pleura (Erfahrungen über Chirurgie der Lunge und Pleura). B u M Ch 19 4 1xxx 10 67  
By Zentralbl f d ges Ch Grenzgeb

This work describes a series of clinically interesting cases of surgery of the chest which serve as a basis for a general discussion of this field of surgery which is still in process of development.

In the treatment of empyema rib resection with rapid thorough emptying out of the pus is the operation of choice the after treatment consists of frequent forced respiratory exercises. In putrid empyema good results are obtained by disinfection with solution of collargol then filling the cavity with concentrated carbolic acid irrigation with alcohol and filling with bismuth paste (1 case). In chronic empyema larynx suction drainage was often unsuccessful. Extensive plastic operations had to be undertaken. In one case of which the history is given these operations had to be repeated frequently and combined with pneumolysis and plastic operation with flaps.

An unusual case was that of a one-year-old

child in which after a croupous pneumonia a pyopneumothorax developed for which no explanation could be found.

3 A case of putrid abscess of the lung was first treated in vain by artificial pneumothorax and finally cured by extensive rib resection disinfection of the large cavity and filling it with bismuth paste. Another case of abscess of the lung which was treated by insufflation of nitrogen into the pleural cavity showed temporary improvement but finally death resulted from embolism of the lung.

4 In a case of tubercular pyopneumothorax an extrapleural plastic operation was done on the thorax without effect. A peculiar method of determining the seat of the lung fistula is described in the article.

5 In the treatment of bronchiectasis opening and external drainage did not give very satisfactory results (4 cases). Better results were obtained by extrapleural plastic operation. TIGHE.

## HEART AND VASCULAR SYSTEM

Auleng and Boudol. Immediate and Late Results of a Suture of the Heart (Résultats immédiats et éloignés d'une suture du cœur). Presse méd 1913 xli 10 7 By Journal de Chirurgie

The authors report a case of injury of the right auricle caused by a sharp instrument. The signs of injury of the heart—pallor, anguish, threadlike pulse distant and dull heart sounds—were very clear. Operation was performed a half hour after the accident through an osteocutaneous flap. The pericardium which was full of clots was emptied. The right auricle presented a transverse wound 1 cm long which was sutured with two catgut sutures. No drainage was used. The wall was sutured. Recovery was complicated by a left pleural effusion which was absorbed spontaneously in a month. There was complete recovery in six weeks. When discharged there was no alteration in the cardiac rhythm. Auscultation of the left lung showed only a little obscurity in the breath sounds.

A year later the patient was called upon for military service and was able to pass the physical examination. During his two years of service he had no indisposition due to his cardiac lesion. The heart functioned normally with almost complete anatomical integrity. The only abnormality was a slight cardiac hypertrophy accompanied by a little cardio-sclerotic cretism, exaggeration of the apex beat and the relative dullness of a slightly hypertrophied heart these signs being corroborated by pulse tracings and radiographic examination.

J DUBOIS

W H Leriche and Mouriquand. Brauer's Operation in a Case of Uncontrollable Asystole in a Child (Opération de Brauer dans un cas d'asystolie irrédécible chez l'enfant). Lyon méd, 1914 cxviii, 246 By Journal de Chirurgie

The case was in a child of 14 with a mitral lesion due to rheumatism. There had been asystole for

two weeks which resisted all medical treatment. Operation was performed under ether and was well borne. At the end of a week there was considerable improvement but soon the child had another attack of rheumatism and died a few days later with complete asystole. Autopsy was not performed but it is practically certain that the aggravation was due to a new attack of rheumatic endocarditis. Whatever the reason there was not the rapid improvement in the first few days after the operation that is generally obtained.

Another case was that of a carpenter of 45 treated for a double serofibrinous tubercular pleurisy. During convalescence signs of a systole appeared. As medical treatment failed cardioclysis was performed. The result was excellent and at present two and a half years later the patient is working at his trade 10 hours a day. The improvement persists although there is extensive ossification of the region operated on. C. Corrie

Gardère P. C. and Arnaud Brauer: Operation in a Case of Tubercular Adhesions of the Pericardium (Opération de Brauer dans un cas de symphyse tuberculeuse du péricarde). *Lyon médical* 194 CXXV 193. By Journal de Chirurgie

From the discussion on Brauer's operation it seems that although it is difficult to define its mode of action it is the best treatment in adhesions of the pericardium and mediastinitis when they cause asystole but in asystole due to cardiac lesions the results are less satisfactory. A case operated upon by Arnaud was a woman of 42 who had a left pleurisy and then a right pleurisy in October 1912. In January 1913 symptoms of adhesion appeared. From January to July she had thoracentesis performed 11 times and abdominal paracentesis 6 times 39 liters of fluid being removed. An operation was performed without anesthesia and was well borne. She improved for a time but later relapsed and died in January 1914. G. Corrie

## SURGERY OF THE ABDOMEN

### ABDOMINAL WALL AND PERITONEUM

Dandy W. E. and Rowntree L. G. Peritoneal and Pleural Absorption with Reference to Postural Treatment. *A. S. S. Phila.* 914 ix 587. By Surg. Gynec. & Obst.

The authors review briefly the various treatments which have been used giving the reasons advocated by the various authors for advocating the methods after which they enter a discussion of experimental work of their own to determine the manner and rapidity of absorption from peritoneal and pleural cavities and the value of various postural methods. The basis of postural methods of treating peritonitis was von Recklinghausen's claims (1861) of open stomata which established direct communication between the peritoneal cavity and the lymphatic system thus affording a rapid absorption of peritoneal fluids. These stomata were thought to be limited to the central tendon of the diaphragm. Kallsoff, Muscatello and MacCallum have proved the stomata to be artefacts. Muscatello however maintained that an intraperitoneal current carried the fluid to the central tendon of the diaphragm; this latter he considered the exclusive absorbing area of the peritoneal cavity.

Clark in 1897 advocated elevating the foot of the bed 30 degrees in the treatment of peritonitis arguing that gravity would hasten the current and increase absorption. Clark himself no longer uses this method.

Fowler in 1900 advocated the sitting posture in treatment of peritonitis thereby hoping to retard the intraperitoneal current and thereby favor the accumulation of fluid in the pelvis where absorption was considered minimum.

Coffey has advocated a combined lateral and head

up position. Küster utilizes the ventral position.

Experimental work by Starling and Tubby (1894) proved that absorption was into the blood stream and not into the lymphatics. Mendel (1898) and the authors are in accord with Starling and Tubby.

Dandy and Rowntree after injecting phenolol phosphatase into the peritoneal cavity recovered it from the blood in 1 to 4 minutes from the urine in 4 to 6 minutes and from the lymph (thoracic duct) in 20 to 60 minutes. In one hour 40 to 60 per cent was recovered from the urine only 0.1 per cent was recovered from lymph in one hour. This is true irrespective of the position of the animal following the injection. Absorption is almost entirely by the blood.

The results of experiments to determine the effect of posture on the rapidity of absorption from the peritoneal cavity is as follows:

- 1 Active absorption in all postures
- 2 The absorption in head-down position is the same as in ventral and dorsal positions
- 3 The absorption in the pelvis down position is 15 per cent less than in the other three positions

For this we have no adequate explanation.

Isidor Corrie

Pikin F. M. Experimental Study of the Treatment of Peritonitis (Etiologie experimentelle Uterus-entzündungen und Frage der Peritonitisbehandlung). *Beit. z. Ch.* 9 4 1899 5. By Zentralbl. f. d. ges. Ch. Göttingen

In purulent peritonitis Hirschel recommended that 100 to 300 gm. of a 1 per cent solution of camphorated oil be poured into the abdominal cavity claiming that among other effects it prevented the formation of adhesions. To test the truth of this, the author undertook experiments on dogs. He

found that camphorated oil had no effect on the course of the disease the animals treated with it died at about the same time as the control animals. In spite of these results he tried camphorated oil in 8 cases of purulent peritonitis without any results.

Another series of experiments on rabbits was then tried. The serous surfaces of the large intestine were sutured to one another and after two weeks the abdominal cavity was again opened and the adhesions freed. Camphorated oil was poured into the abdominal cavity of some of the rabbits and the others were kept as controls. Camphorated oil was also poured into the abdominal cavity of some normal rabbits.

On opening the abdominal cavity two weeks later it was found that a serous exudate had formed. After two more weeks there was an extensive fibrous deposit covering the intestine and this disappeared two weeks later.

From his experiments the author comes to the conclusion that camphorated oil has no effect on the course of purulent peritonitis and that in adhe- sive peritonitis it not only does not prevent but rather promotes the formation of adhesions.

VO HOUT

**Kaufmann C.** Examination for Abdominal Hernia (Die Untersuchung auf Leibesruch). *Correspondenzblatt für die Grenzgeb.* 1914, 1, 73.

Large abdominal hernias can always be easily diagnosed the only difficulty being the distinguishing of an inguinal from a femoral hernia or the confusion of an inguinal hernia with a cold abscess and the different forms of hydrocele and of a femoral hernia with a varix of the saphenous vein.

The author gives a special method for demonstrating beginning or small hernias in either the standing or lying position. In standing a sharp bending backward of the trunk causes tension of the anterior abdominal wall so that palpation or sometimes even inspection allows the demonstration of the presence of a rupture. In the inguinal region the spermatic cord is taken between the thumb and index finger to see whether the cord swells when the trunk is bent backward and the patient coughs. Examination in this position has the advantage that by tension of all the layers of the abdominal wall an interstitial inguinal hernia is fixed at the internal inguinal ring and cannot escape unobserved. The author has verified the correctness of this method of diagnosis by radical operation and now as a general rule operates also on the apparently healthy side confirming Gelpke's results who in 80 per cent of all operations for inguinal hernia in young people found a completely formed hernial sac  $\frac{1}{2}$  cm long on the sound side. The bending back of the trunk has the same advantage in femoral hernia. The examination in the lying position thus follows determines the degree to which the hernia can be replaced and the condition of the hernial opening and canal.

In examination for the military service life insurance or the railway service the examination in the standing position is sufficient while examination for accident insurance should also be performed carefully in the recumbent position.

KAERGER.

**MacLennan A.** The Simplified Operation for the Cure of Hernia in Infants. *Med. Press & Circ.* 1914, 25, 157. By Surg. Gynec. & Obst.

The ordinary treatment of a hernia in an infant is by the application of a truss or of a skein of wool or by incessant reduction. With this treatment the author takes issue and claims that though the sac becomes untenantated it nevertheless remains a sac and the notice remains up. To let the presence of so many unoccupied sacs found in the cadaver and during operations goes far to prove the permanency of the sac and in view of the fact that the anatomy of hernia in infancy is identical with that of later life it is clear that any form of treatment which does not obliterate the whole sac is useless. So many cases are met with in adults with a history of an infantile hernia said to have been cured that the author claims it is doubtful if such cases were cured and practically certain that no one ever develops a hernia who has not had since infancy a sac ready formed.

The author is in favor of an early operation in all cases of infantile hernia. The procedure is as follows. If phimosis is present the child is circumcized at least one month before the proposed radical operation. The skin is prepared with soap and water and alcohol and chloroform is used as a general anesthetic. The incision is made over the internal ring and should not exceed three-quarters of an inch. The deeper tissues are retracted apart by blunt retractors. The sac and cord are identified and picked up and drawn out of the wound. The sac is separated by wiping with gauze. The sac is treated by the MacEwen method the crumpled up sac serving as an efficient plug at the internal ring. In young children there is no need for careful deep suturing of the structures as in an adult. The skin is closed with two or three silkworm sutures and a thin roll of gauze and adhesive used as a dressing. Elaborate dressings only annoy the infant and are unnecessary. The child may go home as soon as it recovers from the anesthetic and should return in one week for removal of the sutures.

J. H. SKILES

**Duval P.** Congenital Diaphragmatic Hernia. Left Subcostal Appendicitis (Hernie diaphragmatique congénitale appendicite sous laire gauche). *Bull. et m. m. soc. de chir.* 1913, 57, 572. By Journal de Chirurgie.

A boy of years had been ill since his birth complaining of pain in the left side of the thorax. It appeared spasmodically with irregular difficulty in respiration and heart disturbance. Twice he had attacks accompanied by fever and vomiting.

Results of auscultation were variable and puzzling and a certain diagnosis could not be made until radiography showed that the caecum and the ascending and transverse colon were in the left pleural cavity.

Left epigastric transverse laparotomy was performed and it was found that the orifice of the diaphragm was back of the greater curvature of the stomach. The incision was prolonged to the posterior angle of the eighth rib the whole rib resected and a large opening made in the pleura. Almost the whole of the small intestine the caecum and the ascending and transverse colon were found in the thoracic cavity and were fixed by adhesions. The caecum was thickened and inflamed the appendix was enormous and surrounded by old caseous foci the results of numerous attacks of appendicitis. The adhesions were freed and the appendix resected. Then without much pain the mass of intestines was replaced in the abdomen. The diaphragm was reconstructed by suturing the thorax and abdomen were sutured. The pleura was punctured and the lung seemed to dilate auscultation revealed breath sounds under the scapula. The child died the next morning with a pulse so rapid that it could not be counted though the respiration was relatively normal.

This case of subclavicular appendicitis in a diaphragmatic hernia is rare perhaps unique. The diagnosis of diaphragmatic hernia is almost impossible because it is manifested only by signs of occlusion. Radiography is of the greatest value. The only way of operating successfully and obliterating the abnormal orifice is through the thorax.

Two cases of diaphragmatic hernia are reported both of which were found only on autopsy though one of them had been operated upon twice for symptoms of occlusion the cause of which remained unknown. He believes that such lesions can never be successfully treated by laparotomy though the thoracic route gives free access. J. Deaver

## GASTRO INTESTINAL TRACT

Schmieden, Ehrmann and Ehrenreich: Modern Diagnosis of Stomach Diseases Verified by Forty Operative Cases (Modern Fälle diagnostisch durch 40 Operationen. Grosse Prüfung). W. H. d. Gr. geb. d. Med. Ch. 914 xiv. 470. By Dr. Traub, f. d. gen. Ch. i. Greifswald.

The authors made a careful clinical examination of 40 cases of stomach disease and controlled the results by operation. History and present condition are given in detail the chemistry and motility of the stomach tested examination made for manifest or occult bleeding the findings on palpation carefully noted and the roentgen examination added. Especial attention is given to hunger and night pain.

Motility was tested by Strauss method of adding a portion of who the berries and currants to the evening meal and removing the remains the next morning

for examination. Röntgen rays were also used in testing the motility. The secretion was tested by examination of the stomach contents after an Ewald-Bots test breakfast.

Fourteen cases of carcinoma of the stomach were examined. 8 cases of ulcer of the duodenum. 3 of mixed ulcer. 6 of ulcer of the pylorus. 3 of ulcerated hour-glass stomach, 2 cases each of gastric achylia and gastroparesis and one case each of pencholecystitis and gastric crises. The conclusions are:

1. If stomach disease has existed for many years it indicates ulcer rather than carcinoma. Carcinoma generally arises in people who up until that time have never had stomach trouble.

2. Diagnostic conclusions can be drawn from age only with caution. 42.8 per cent of all the cases of stomach carcinoma were under fifty years of age.

3. Loss of weight is not conclusive evidence of carcinoma.

4. The author could not find that the history night-pain, hunger pain and cold pain, played the part in differential diagnosis of ulcer of the duodenum that is generally ascribed to them. The point of pain on pressure at the right of the umbilicus has greater significance in duodenal ulcer.

5. In ulcer in the region of the pylorus there is pain especially when an effort is made to work. In half of the patients who complained of pain in the back there were adhesions to the pancreas.

6. The value of testing the stomach secretion for the differential diagnosis between ulcer and carcinoma cannot be denied. The majority of cases of ulcerative and post-ulcerative diseases of the stomach or duodenum are accompanied by increased acidity while the reverse is true in carcinoma.

7. In ulcer the degree of acidity is less in stagnant stomach contents than in the test meal removed from the stomach. In carcinoma it is greater.

8. The lactic acid secretion does not have any great diagnostic value.

9. The demonstration of visible or occult blood in the feces has great significance as proving the presence of ulcer or carcinoma.

10. In disturbances of motility the daily quantity of urine falls.

11. Roentgen examination almost always aids in the differential diagnosis between ulcer and carcinoma and often decides it. It is not of much value in simple ulcer.

12. Gastroscopy for which Sussman's instrument is used does not always succeed does not give uniform results and is not without danger. In one of the author's cases fresh perforation found on a case of operation for carcinoma of the stomach was probably due to gastroscopy. Barrett

George A. W. and Gerber: The Practical Application of the Röntgen Method to Gastric and Duodenal Diagnosis. J. Am. Med. Ass. 94, 120, 07. By Surg. Gynec. & Obst.

The authors confess that the value of roentgenologic gastro-intestinal diagnosis has been criticized.

that many errors have been committed and that much discredit has been cast upon this procedure. They say that this state of affairs has been brought about by several conditions and mention three as follows:

1. The pioneers developed a technique which relied largely upon fluoroscopy and diagnosis by symptom-complexes which indirect method the authors contrast with the positive or direct method which has been so brilliantly developed.

2. Internists without technical experience have endeavored to do X-ray work, have made errors in diagnosis and have enlarged the literature with comments on the inefficiencies of the method.

3. The clinical diagnosis has been allowed to bias the roentgen diagnosis. The authors say that a roentgen diagnosis should not be made unless there is positive roentgen evidence: (a) a definite abnormality in the contour or structure (size) of the bismuth mass. They do not explain why shadows of such abnormalities are more positive or direct than shadows which reveal exaggerated peristalsis spasm etc.

In the absence of an incisura and with normal size shape and position of the stomach there is no positive basis for the diagnosis of gastric ulcer though some investigators are willing to make an inferential diagnosis of gastric ulcer from the presence of tender points and six hour residue alone. The authors regard six hour gastric stasis as the least important factor in roentgen bismuth diagnosis. They base the diagnosis of early fundal carcinoma partly on the presence of irregular defects of filling and partly on abnormalities of peristalsis. Some space is devoted to well known arguments for the diagnosis of duodenal ulcer by deformity of the cap. More and more cases are being found in which gall stones are demonstrated. ALBERT MILLER

Smithies, F. A New Fluoroscopic Sign for the Differentiation of Pyloric Spasm of Extra Gastric Origin from that Associated with Uncomplicated Gastric Ulcer on or near the Lesser Curvature. *J Am V Ass* 9 4 1913 308  
By Surg. Gynec. & Obst.

By the fluoroscopic examination of the stomach containing material opaque to the X-rays fully 60 per cent of calloused and complicated ulcers are readily recognized and located with fair accuracy. Acute ulcers or those involving the pyloric half of the stomach or near the lesser curvature particularly if these are of the uncomplicated type must be judged to exist largely in the light of clinical history and laboratory data. This group gives the great majority of incorrect roentgen diagnoses and when the mist has been made appendix or gall bladder disease is the usual operative finding. To differentiate the pylorospasm of uncomplicated gastric ulcer near the lesser curvature from that due to a lesion of the appendix or gall bladder Smithies examines after the six hour meal and with a standard butt milk barium suspension. The

findings which are similar to both are noted. The patient then receives  $\frac{1}{50}$  gr atropine sulphate hypodermically and is reexamined in half an hour. In true ulcers on the lesser curvature vigorous palpation will usually elicit a point of maximum tenderness moving with the stomach and accompanied generally by an incisura. In pyloric spasm from appendix or gall bladder lesions there is no sharply marked focus of tenderness which moves with the stomach or which upon palpation evokes an incisura. Re-examination on different days should confirm the finding. ALBERT MILLER

Reichel, H. Röntgen Picture and Operative Findings in Carcinoma of the Pylorus (Röntgenbild und Operationsbefund bei Pyloruscarcinomen). *M. n. ch. med. Wch. schr.* 9 14 1913 137  
By Zentralbl. f. d. ges. Chir. u. Gynäc.

The comparison between the roentgen picture and the operative findings in a series of cases of carcinoma of the pylorus shows the value of the roentgen picture in the early diagnosis of this disease. The diagnosis is founded on the demonstration of characteristic changes in the shadow, chiefly on circumscribed gaps in the bismuth content of the stomach and on visible signs of contraction and of disturbed motility.

The boundaries of the gaps in the bismuth content are generally zigzag and ill defined and sometimes very peculiar. They often become clearer by palpation in front of the roentgen screen. In this way a marked hindrance to peristalsis in the suspected region may also be demonstrated. Generally in carcinoma of the pylorus the smaller curvature is more or less involved in the pathological changes.

Medullary or fungous tumors can be distinguished from the diffuse infiltrating forms of carcinoma. In the former the normal form of the stomach is maintained and the defects in the roentgen shadow in the pylorus and surrounding region are sharply defined. In the latter there is marked distortion of the stomach outline from contraction.

The roentgen picture gives valuable information for the diagnosis of carcinoma of the stomach where internal methods do not give any satisfactory diagnostic picture. It also gives supplementary information where there are no satisfactory clinical data as to the kind, location or extent of a malignant tumor nor as to its operability. OEHLEK

Delore and Santy. Gastrectomy in Cancer of the Stomach (Gastrectomie dans le cancer d'estomac). *Lyo. k.* 9 4 1913 3  
By Journal de Chirurgie

The chief point of interest in this article is Delore's statistics of 73 gastrectomies for cancer the first 43 were published by Delore and Alamartine the 30 most recent ones are published in detail at the end of this article. The following figures show the progressive improvement in results.

From 1901 to 1905 18 operations with 8 deaths 44 per cent



From 1905 to 1908 18 operations with 6 deaths  
33 per cent  
From 1908 to 1911 18 operations with 3 deaths  
16 6 per cent  
From 1911 to 1913 19 operations with 1 death  
5 per cent

This improvement is not due to greater strictness in the choice of cases for the proportion of radical operations is practically the same before 1909 gastrectomy was performed in 2 per cent of the cases and from 1909 to 1913 in 26 5 per cent. The real cause in the improvement in the results is improved technique and the most careful pre-operative and post-operative treatment and the use in some cases of a two-stage operation. This is especially indicated in cancers that have produced extreme stenosis and dilatation of the stomach. The two stages of the operation are performed as near together as possible at intervals of 10 to 12 days.

Delorme almost always uses Billroth's second operation, anastomosing the stomach and jejunum by means of a Jaboulay button. He pays great attention to preventive haemostasis of the pedicles and the closing of the two ends which he accomplishes by means of three fine catgut sutures. He buries the stump of the duodenum under the peritoneum in front of the pancreas. He recommends feeding the patients early for if the sutures are not water tight from the first they have no chance of becoming so; moreover the fact that irrigation of the stomach in gastric haemorrhage immediately after operation is harmless shows that the stomach is impermeable at that time. In a general way the immediate and late results of gastrectomy are better than those of gastro-enterostomy therefore Delorme and Santy give the preference to gastrectomy even as a palliative operation in cases where excision cannot be absolutely complete. Adhesions and involvement of the glands, which are often inflammatory and not neoplastic are not an absolute contra-indication to gastrectomy. CH. LEVORMANT

Port S. Blond a M. th. d. of F. cluding th. Py  
lorus (L. exclusion p. longue à l. Biondi) f. d. h.  
9 a. xu. 1917 By Surg. Gynec. & Obst.

Porta reviews the indications for excision of the pylorus and describes a new technique used by Biondi because he has found the older methods defective. The various methods of section take an exceedingly long time, thorough asepsis is not possible and it is difficult to mobilize the parts operated upon especially if there are solid adhesions. The plastic method and those by ligation are only temporary. Permeability of the pylorus is eventually re-established.

Biondi makes an incision 6 to 10 cm. long on the anterior surface of the antrum parallel to the axis of the stomach, opening the serous submucous and muscular coats. This incision extends from the antrum towards the duodenum where the mucous membrane more easily is. The mucous membrane is then dissected and a tube of it

closed at each end by being transfixed with two silk sutures. It is excised and the incision sutured in three layers the layers being turned in. Care should be taken to cover the line of suture with serous membrane. Kausch's gastro-enterostomy is performed before the excision.

Experiments on the cadaver and animals have shown that it is not a difficult procedure. The mucous membrane at and near the pylorus is thicker and more resistant than that of other regions of the stomach so that it is easily dissected. Care should be taken not to involve the muscularis mucosae and if it is necessary to pass beyond the pylorus into the duodenum greater care must be exercised for the muscular and connective tissue layers are greatly reduced in thickness. It is a good plan to put the end of the left index finger between the muscular and mucous coats at the upper edge of the incision and then dissect from the lower edge until the finger is reached.

Ulcerations of inflammatory tumors do not interfere with the operation. Superficial ulcerations may make holes in the tube but that does not do any harm. The advantages of the method are that it does not involve the large gastro-omental vessels it is performed in parts that are covered with peritoneum it does not demand the opening of the posterior cavity of the omentum it is easy to perform and it is much easier to maintain asepsis than in the other methods. It can be performed when there are adhesions and it does not produce any change in the form of the stomach. The closure of the pylorus is permanent and it is not followed by pain. Porta has performed the operation three times with excellent results. Biondi 9 times, and other operators several times. He concludes that it is the operation of choice in the excision of the pylorus. A. Goss

Bier, A. Diagnosis of Ulcer of the Duodenum (Zur Diagnose des Ulcus duod.) Dr. Lucke med.  
W. h. schr. 013. xxii. 2492  
By Zent. lib. f. d. ges. Ch. Griesnab

The knowledge of duodenal ulcer has been extended recently but the point of greatest interest is still its diagnosis. As Moynihan has had the greatest experience on this point Bier uses his results as a guide and discusses a series of 43 cases operated on in his own clinic.

The condition is more frequent in the male sex but in contrast to the English and American authors he found ulcer of the duodenum less frequent than ulcer of the stomach. The most important point in the diagnosis is the history which according to Moynihan makes physical examination of the patient almost superfluous although of course he always makes the examination. The chief points are the hunger pain and the paroxysmal nature of the pain the disease itself is of long duration. Premonitory symptoms are discomfort and distention several hours after eating and acid or bitter eructations.

From Moynihan's description it would seem that with a careful history a mistake in diagnosis is scarcely possible and he himself made only three mistakes in 100 consecutive cases. But Bier has found that in spite of a perfectly characteristic history in many cases no ulcer was to be found on laparotomy and on the other hand often when there was an ulcer there had been no history to indicate it. The latter was the case on abdominal incision in 20 of the 43 cases. He gives a case history which shows that there may be no ulcer though there is a characteristic history.

The results of palpation are of limited value especially the pain on pressure on the right side and the tension of the right rectus. Chemical examination is made only for the sake of completeness. Even the roentgen picture is not nearly so valuable as in ulcer of the stomach as is shown by the fact that so many signs are given none of which is really characteristic.

The most constant finding increased peristalsis found also in other conditions the permanent bismuth shadow may be deceptive and the signs of penetrating ulcer are so rare as to be of only limited value. Cicatricial stenosis is not easy to recognize in the roentgen picture. However the roentgen examination should always be made if only for the purpose of showing the presence or absence of stomach disease. On the other hand the demonstration of occult blood is of great diagnostic value allowing for the sources of error in it.

In differential diagnosis it is not easy to decide between ulcer of the stomach and of the duodenum there is less difficulty in deciding between ulcer and gall stones and Bier has had no difficulty in distinguishing between ulcer and appendicitis. While the diagnosis of ulcer of the duodenum is difficult the author does not think it more difficult than the diagnosis of ulcer or carcinoma of the stomach was before the development of roentgen technique and in which there are even yet mistakes in diagnosis.

Boo

**Marqui** Perforation of a Peptic Ulcer of the Jejunum Six Years after a Gastro-Enterostomy Operations. Reciprocal Influence of Various Methods of Gastro-Enterostomy in the Production of These Ulcers (Perforation d'un ulcère peptique du jéjunum six ans après gastro-entérostomie. Influence des divers procédés de gastro-entérostomie sur la production de ces ulcères). *Bull. Im. m. ec. ch. P.* 93 xxxi 57 By Journal de Chirurgie.

Hartmann reports a case as described in the title operated on by Marquis. The last statistics in regard to ulcers of this sort by Van Rooijen in 1910 showed 81 cases. Hartmann has collected 42 from the literature and reports one of his own and thus one of Marquis making a total of 123 cases. On these cases he bases a study of the conditions which lead to the production. They come on three months to eleven years after the initial gastro-enterostomy they are more frequent in men than

in women in the proportion of five to one they always follow gastro-enterostomy for ulcers and more frequently the Y-shaped operation.

It seems to be settled that the chief cause of these peptic ulcers is the prolonged contact of a very acid gastric content with the mucous membrane of the jejunum but for the ulcers seated just at the gastrojejunal opening faults of technique seem to be to blame such as silk projecting into the lumen, hematoma or the delayed elimination of a Murphy button. It is these gastrojejunal peptic ulcers that cause the retractions sometimes obliterations of the mouth of the anastomosis that have been attributed to persistent permeability of the pylorus.

From all of the evidence he concludes that to prevent such ulcers it is necessary (1) At the time of the operation (a) in order to prevent the passage of acid gastric juice over the jejunum to avoid Y shaped gastro-enterostomy and (b) to avoid all traumatism of the surface therefore not to use the button for anastomosis nor to crush the tissues with clamps and to secure perfect coaptation with the sutures (2) after the operation (a) to irrigate the stomach the first few days at any sign of infection or gastric putrefaction (b) to keep patients under treatment and not consider them radically cured because a gastro-enterostomy has been done the mucous membrane is chronically inflamed and it requires some time to restore it to a normal condition. By observing these rules most of these cases of peptic ulcer may be prevented.

DELBEY believes that silk sutures are at fault as they are eliminated slowly and favor the penetration of the gastric juice into the tissues.

CUNEO does not believe that silk and the use of clamps has anything to do with the production of these ulcers. He believes the chief cause is the persistence of a high hydrochloric acid content. In such a case he would be disposed to operate on the nervous secretory mechanism of the stomach to decrease the acidity.

TUFFIER has never had a case. He believes they are due to hyperchlorhydria rather than to the technique employed. He never uses clamps and long ago gave up silk for linen.

WALTHER agrees with Tuffier and uses the same technique.

RICARD had one case in which he resected the lips of the ulcer and sutured it again with good results. He believes the ulcers may be due to a certain extent to hyperacid secretion but thinks the chief cause is faulty technique. J. DUBOIS.

McLean A Post Operative Ileus. *I. S. g. Phila.* 94 lux 407 By Surg. Gynec. & Obst.

McLean gives the results of experimental investigations into the possible causes of death following ileus and how to overcome the effects of ileus once it is present.

The clinical picture in both the mechanical and paralytic ileus is the same. Necropsy has

shown that in some fatal cases no signs of peritonitis were present. What is the cause of death in these cases? The prevailing impression in regard to the cause of death in ileus seems to be that it is a toxic condition originating from the absorption of bacteria or their toxins or from the absorption of some altered physiologic secretions of the pancreas, liver and intestinal mucosa.

McLean produced artificial intestinal obstruction about 6 inches from the pylorus in dogs. The duodenal and gastric secretions of these cases were tested as to their toxicity by injecting a filtrate into guinea pigs. The pigs remained lively and well.

The serum from the experimental animals was injected into guinea pigs. The guinea pigs which received more than 2 ccm died as a rule. It was found that normal dog serum injected into guinea pigs in 2 ccm quantities proved fatal.

The gas from the intestine of the experimental dog was injected into the peritoneal cavity of normal dogs without causing symptoms. The blood was directly transfused to normal dogs without causing symptoms.

McLean therefore concludes that death is not due to toxemia. He further noted a marked loss of weight usually amounting to one tenth of body weight before death. This loss of weight is attributed to the loss of body fluids (vomitus etc.). This loss of weight McLean believes must have an enormous effect on blood pressure. Braun has shown in experiments on blood pressure that the death of animals from ileus differed in no way from those bled to death slowly. Consequent upon this fall in blood-pressure is a disturbance in the cerebral circulation. This McLean considers one of the prime factors of the direct cause of death in ileus. Hartwell and Hoquet have shown that life in experimental dogs can be prolonged by introducing saline to replace the fluids lost.

The rational treatment based on his experiments as suggested by McLean is (1) Subdue the distention (ileostomy) and (2) restore the fluids lost by hypodermoclysis, proctoclysis etc. *Isaacson, Conn.*

Jordan, A. C. Intestinal Stasis from the Standpoint of Radiology. *Int J S R* 9:4:2:11, 93. By Surg. Gynec. & Obst.

The author describes in detail his technique in the radiological examination of the intestinal tract. No preliminary care of the patient is necessary. About one hour after breakfast the patient is given an emulsion consisting of carbonate of bismuth, 4 oz sugar of milk, 1½ oz and enough water to make a creamy fluid. The chest, esophagus, stomach and duodenum are examined at once. The iliocecal region is investigated at the second visit five to seven hours later. Often a third visit is required the same day nine to twelve hours after the bismuth meal. The subsequent visits for the large intestine are usually timed to fall at the following periods after the bismuth meal: 24 hours, 36 hours, 48 hours, 72 hours and 96 hours.

The examination of the duodenum may show a dilatation and lengthening even in the early stage of intestinal stasis. In addition to the change in size there is increased activity of the peristalsis in fact in many cases the duodenum may give the appearances of writhing. These changes are due to a kink at the duodenojejunal junction. Ileal stasis is always present when there is an extended duodenum. This often results in an ascending infection from the caecum which may travel up as far as the duodenum. The ileal stasis may be due to a mechanical obstruction in the ileum or lower down in the large intestine. Many times the appendix is responsible for the kink, but any of the locations of bands may be the seat of the obstruction.

Jas H. Smith

Maggiore, Two Cases of Congenital Megacolon (Deux cas de mégacolon congénital). *Pediatrics* 1914 22:3, 33. By Chourme.

The first case cited is a child of six, born at term—the father tubercular. There was stubborn constipation from birth, a bowel movement occurring only every 8 to 12 days. The patient was pale and poorly developed, the abdomen distended to 62 centimeters at the umbilicus. There was elevation of temperature, vomiting and discharge of blood from the anus. 3 kg of fecal matter was removed manually and the patient died in collapse. The large intestine showed enormous dilatation and the intestinal wall was 5 mm thick.

The second case was a child of two years and two months born at term—the father syphilitic. There had been stubborn constipation since birth, bowel movements occurring only every 8 to 15 days. The child was poorly developed. The abdomen was almost normal in size. There was meteorism on percussion.

The author attributes death in his first case to syncope caused by the extreme dilatation of the large intestine though it is not possible to exclude intoxication from the fecal matter. Hypertrophy of the wall of the large intestine is a congenital malformation which in these two cases was due to paternal infection syphilis in one case and tuberculous in the other. P. Cassin.

Don, A. Is Colectomy for Constipation a Radical Procedure? *Ch J* 1914 22:11, 209. By Surg. Gynec. & Obst.

The author discusses the various causes suggested by Lane and other supporters of colectomy for constipation not agreeing in a single instance with the arguments advanced. The statement that the erect position causes falling down of viscera is based on the score that the liver and spleen the two heaviest organs, show no tendency to fall and because caudally the intestines contain so much gas that they tend to rise. Don claims that no evidence is brought forward that the caecum becomes elongated and dilated and claims that inasmuch as the hepatic flexure is normally in contact with the

liver it cannot occupy a higher position than in the healthy subject as the Lane school asserts. Lane is accused of not troubling himself with logic or proof and in a comparative table is placed Lane's list of the affections which may be cured by removing the colon side by side with the advertisement of a well known quack pill.

The comparative anatomy of the domestic animals is brought in to show that although these animals are not costive yet their intestinal tracts contain many bands narrowings sacculations kinks twists, and mobile and fixed portions which to the author would appear to afford many excuses for surgical activity. Radiology is stated to be a comparatively new aid to the study of abdominal diseases and as yet there is no standard.

Don believes that the pathologists alone can settle the question as to whether the bands which are found are inflammatory or not. If they are exaggerated congenital formations it should be possible to repair them without removing the colon while if they are inflammatory the cause of the inflammation should be found before a colectomy is done.

E. H. ARMSTRONG

Gruet P. Best Technique for Externalization in the Extirpation of Cancer of the Colon (De la meilleure technique opératoire applicable à la méthode d'extériorisation dans l'extirpation des cancers coliques). *The et d'oct P.* 1914.

By Journal de Chirurgie

The author describes the present status of the question of externalization of cancers of the colon. He describes in detail the technique of Guenu who holds that the tumor must be brought outside the abdominal wall but the pedicle may remain inside the abdomen if it is outside the peritoneum.

1. The first stage consists of extraperitoneal externalization of the tumor. extraperitoneal externalization of the pedicle. After exploring and freeing the tumor the loop is externalized. The mesentery being spread out the peritoneal leaf of one of its surfaces is slightly incised and then dissected as far as possible passing well outside the suspected zone and the peritoneum thus dissected is sutured to the parietal peritoneum. The same thing is done on the other side. The abdominal wall is closed above and below the externalized loop.

2. In the second stage resection of the neoplasm is performed followed by suture of the posterior semicircumferences of the ends of the intestine and suture of the two interior semicircumferences in the skin wound. This is performed about 8 days after the first.

3. In the third stage the artificial anus is closed by enterorrhaphy. This should not be done until the general health has improved. Guenu always performs this enterorrhaphy strictly outside the peritoneum.

Gruet has collected 17 cases 7 of them being Guenu. The first case was cancer of the splenic flexure. Death occurred 8 days after the closing

of the anus from hemorrhage. The second case was cancer of the splenic flexure without closure of the anus. The patient survived 3 years. In the third case cancer of the descending colon no closure of the anus recurrence in the liver 4½ months after the operation. Case 4. Cancer of the sigmoid. Recurrence in the true pelvis 16 months later. Case 5. Cancer of the termination of the sigmoid loop. No closure of the anus. Recovery. Case 6. No details. Case 7. Sigmoid cancer. Patient in good health after 6½ years. The work closes with a very important statistical study and the author concludes.

Externalization should only be performed in cancer of the left colon especially in feeble patients with vegetating septic cancers accompanied by lesions of the wall of the adjacent loop. Reybard's colectomy or the methods of colectomy in two stages should be reserved for the favorable cases of small movable cancers without marked lesions of the adjacent loop and for patients who are still in good general health. Externalization is sometimes an operation of necessity but more generally of prudence and its indications should be extended where the surgeon is in doubt as to the condition of the intestinal walls.

J. L. ROUX BLUÉ

Jackson R. Some Unusual Phases of Sigmoidoscopy. *copy T. Am Proctol Soc Atlantic City 1914*  
J ne By Surg Gynec & Obst

The diagnostic value of the sigmoidoscope has been the topic for much discussion and is increasingly appreciated by hospitals but much less so by the profession and insufficiently in medical teaching. Explicit statements of its considerable therapeutic uses are not found in German American or English literature. The instrument enhances the extent and accuracy of rectosigmoidal therapeutics and specifically it facilitates the use of certain instruments topical applications the relief of high impaction and the treatment of stricture and certain other lesions. Serious trauma from the sigmoidoscope is more liable to happen than some authorities admit as illustrated by three cases of intestinal perforation cited from the German. Two personal cases are detailed where the patients were in serious condition from occlusion of the bowel but were relieved and saved by sigmoidoscopy done with diagnostic intent only.

Pelvic visceroptosis hypermobility of the sigmoid and the fixed and open rectal ampulla beneath predispose to invaginations and angulations which are fairly frequent in mild and chronic form and are potentially dangerous as a source of acute obstruction. Sigmoidoscopy properly conducted empties the pelvis by gravity—due to the position assumed—by intelligent introduction of the instrument and by the air pressure admitted through it and therefore tends to undo such intestinal malpositions. The occlusion in the two cases related was unexpectedly relieved and doubtless in this way.

Greater prevalence in the use of the sigmoidoscope would bring to light a field for deliberate therapeutic use of the instrument along these lines

**Graham A B: Perirectal Gummata Report of Two Cases. T Proctol Soc Atlantic City 9 4, June**  
By Surg. Gynec. & Obst.

The subject perirectal gummata owes a great deal of its interest to its rarity. The two cases reported are rather unique and worthy of publication. They were seen within twenty-four hours of each other and both presented a typical perirectal gummata in that no lesion of any kind could be detected in the rectum of either patient.

The first patient aged 47 contracted syphilis at the age of 24. He was treated for one year with mercury administered internally and byunctions, and pronounced cured. One year later a large ulceration developed on the left leg above the knee which under persistent antisyphilitic medication required two years to heal. Ten years ago numerous ulcerations appeared in his mouth and throat. A diagnosis of syphilitic ulceration was made and under local treatment alone these ulcerations disappeared in a few weeks. Two years ago ulcerations again being present in the mouth and throat, salvarsan was administered by injection into the right buttock. This caused much pain and it required one year for the complete disappearance of the induration at the site of the salvarsan injection. The Wassermann test was not made nor was any further antisyphilitic treatment prescribed.

In November 19 the patient experienced a slight aching sensation about the rectum. He consulted a proctologist who was unable to find any rectal lesion. Three months later he detected a nodule or induration in the right ischio-rectal fossa. This increased rapidly in size. February 28 1913 he was referred to the author for the diagnosis of ischio-rectal abscess having been made. An examination revealed a case almost identical to that which had been reported by Verneuil. There was a marked induration at the margin of the anus the size of a large orange and it extended across the right ischio-rectal fossa. It was smooth elastic painless to palpation and fluctuation could be detected. Believing that the tumor contained pus immediate incision was advised. This was done under local anesthesia. A deep incision was made into the most prominent part of the induration. It was something of a disappointment as well as a surprise when nothing but a discharge of blood was obtained. The author fully appreciated his error in diagnosis and the possibility of his having incised gummata. The Wassermann test was made and it proved to be a two plus positive. Salvarsan was administered intravenously and the wound healed at the end of ten days. The induration disappeared rapidly. One month later suppuration occurred which necessitated an incision for the evacuation of the pus. The wound healed rapidly and there is now no evidence of an induration or

fistula. Careful examination in this case failed to reveal any rectal lesion. The patient is still under observation and is receiving antisyphilitic medication.

The second case was a woman aged 38 the mother of a child one month old. She had contracted syphilis three years before had received antisyphilitic treatment for one year but no Wassermann test had ever been made. She consulted the author March 1 1913 stating that she had a lump outside the rectum which had appeared three weeks previously and that it was increasing rapidly in size. An examination revealed an induration very similar to that which has been reported in Case 1 except that it was in the left ischio-rectal fossa. It was smooth elastic painless to palpation and there was marked evidence of fluctuation. The temperature and pulse were normal. A rectal examination revealed no lesion. A diagnosis of gummata was made this being somewhat easy owing to the diagnostic error in Case 1 having been made only twenty-four hours previous. The Wassermann test was made and proved to be positive. Salvarsan was given intravenously. The gummata decreased rapidly in size and at the end of three weeks it had disappeared completely. No suppuration occurred in this case. A Wassermann test made one month ago proved negative.

The conclusions are: Perirectal gummata are rare. The two cases reported are unique and of interest in that both were typical examples of perirectal gummata. In both cases the gummata was seen in its early or vascular phase. In one case it appeared 23 years after the initial lesion in the other case it appeared three years following the syphilitic infection. Both gummata were painless to palpation and fluctuation was detected in both. An error of diagnosis in one case was responsible for the incision and subsequent suppuration which followed. In the other case no incision was made and suppuration did not occur. No demonstrable rectal lesion could be detected in either case. The induration in both cases disappeared rapidly under antisyphilitic medication. No fistula resulted in either case.

**Hassler G L: Recurrence in Cancer of the Rectum** (Contribution à l'étude des recidives dans le cancer du rectum) Thèse de doct. Lyon 9 4  
By Journal de Chirurgie

Hassler studies only local recurrence at the site of the operation not recurrence in the glands or metastases. From 3 cases and many statistics he concludes that there is recurrence in about 53 per cent of the cases a figure which is perhaps somewhat too low if it is taken into account that there was no information as regards many of the patients.

The frequency of recurrence is like the severity of the cancer inversely proportional to the age of the patient. Young people bear the operation well but are apt to have a early recurrence in old people the operation is more serious but the results more durable. Sex also has a certain influence the results

are better in the female because the operation is easier

No relation could be established between the size of the tumor and the frequency of recurrence. It is difficult to determine the exact date of the appearance of recurrences. This date however does not seem to depend on the method of operation used. Recurrences are frequent during the first year rare during the second and so exceptional after the third that a case is cured if there has been no recurrence by that time.

Extensive cancers especially colloid cancers are more apt to recur. Whatever their histological form however they may recover if a sufficiently extensive operation is performed. All the methods of operation may give good results the chief thing being to remove a large area and to avoid inoculation.

The perineal method gives permanent recovery, but is applicable only to a limited number of cases the combined abdominoperineal method is very superior to the others because it permits more extensive removal of tissue in difficult cases. Nevertheless all the methods have their indications, depending on the site of the neoplasm the existence of extensive adhesions the age and the degree of resistance of the patient.

Recurrence generally takes place low down in the perirectal cellular tissue or in the scar rarely on the mucous membrane. They often extend to neighboring organs and frequently they develop backward adhering to the sacrum and then invading it. These cases are serious because difficult to operate upon. In fact operation can rarely be performed because the cancer is seen too late. In spite of the opinion of certain authors to the contrary operation should be performed whenever it is at all possible. The patient's condition is improved the pain is decreased and on many even after several operations a permanent cure is obtained. L. HODDARD

Edwards F S. A Protest against the Indiscriminate Use of the Abdominoperineal Operation in Cases of Rectal Cancer. *P. ocol. g. s. t. 9 4* 1904. By Surg. Gynec. & Obst.

The author believes that the abdominoperineal operation used indiscriminately in any case of cancer large or small situated high or low causes the loss of many lives for the operation is accompanied by a 50 per cent mortality.

Edwards believes the operation is indicated (1) in all cases situated in the rectosigmoid junction or lower pelvic colon. (2) In cases where the spread of the growth is suspected out of the bowel due to inflammatory adhesions. (3) In cases of rapidly growing anaplastic young people. It is contraindicated in patients over 60 years of age and in fat males.

The author has operated 50 cases by the parasacral paracoccygeal method with a mortality of only 10 per cent and cure 45 per cent of all cases.

I. G. E. CARL

Anderson H G. Post-Operative Hemorrhage in Rectal Surgery. *P. ocol. g. s. t. 9 4* 1905. By Surg. Gynec. & Obst.

The author has encountered 12 cases of post-operative hemorrhage: 11 in hemorrhoid cases and 1 in a case of fistula. He classifies them as follows:

1. Recurrent within 24 hours after operation from unligated vessels or where the ligature has slipped.

2. Secondary later than 24 hours usually due to sloughing or sepsis. Usually venous in character.

3. Accidental anything interfering with the operative field.

4. Late hemorrhage weeks months or years later due to cancer ulceration pernicious anemia etc.

Another division may be external and internal hemorrhage. The hemorrhage if external can usually be controlled by packing with cotton wool or ligation if internal the sphincter should be stretched and the bleeding point ligated.

ELGEME CARL

## LIVER, PANCREAS AND SPLEEN

Strobel H. Talma's Operation and Cardiolytic (Talma-operation and Kardiolyse). *Beit. H. Ch.* 1904. *XXXVIII* 704. By Dr. Strobel, f. d. ges. Chir. u. i. Grenzgeb.

The author reports the permanent results obtained at the Erlangen surgical clinic with Talma's operation and cardiolytic. The Talma's operation was used 10 times in cirrhosis of the liver and detailed reports of 8 cases were obtained. In 2 cases there was recovery operation having been performed in one case 9 years before and in the second 5 years. In a third case operated on 5 years before there was improvement. 4 patients died from three weeks to one and one-half years after the operation. One case 7 months after the operation showed no improvement. Talma's original method was used also. Narath's modification introducing the omentum into the subcutaneous tissue and Lanz's method of transporting the testicle to the abdominal cavity. No special advantage was seen in either of these modifications.

The author concludes that all cases of cardiac cirrhosis are unsuited for this operation while the cases of primary liver cirrhosis give better results varying with the stage of the disease. The patients had to be punctured several times after the operation to keep the ascites permanently under control.

Brauer's method of cardiolytic was used in three cases of adhesions of the pericardium which is the cause of cardiac cirrhosis where there was not very serious affection of the myocardium. One case operated upon 5 years ago is still in good general condition the second case died two years after the operation of apoplexy in the third three months after the operation there was no improvement. To lay bare the heart a large flap was made with the base directed medially or laterally and the

ribs resected at least from the third to the sixth Cases in which serious changes have taken place in the myocardium are not suited for this operation

OZALIZ

**Flahler G E.** The Rontgen Rays in the Diagnosis of Gall Stones and Cholecystitis. An Improvement in Technique *J Am Med Ass* 1914 LXII 304 By Surg Gynec & Obst

Flahler discusses the difficulties to be overcome and insists on the patient being thoroughly purged by a bottle of magnesia at night and the picture taken the next morning before any breakfast is eaten. He removes all clothing and has the patient lie on the abdomen with arms extended over the head. The upper part of the body is bent to the left opening the space between the lower ribs and the crest of the ilium to the widest possible angle. He takes a second picture by passing the rays directly through the liver between the eleventh and twelfth ribs. This position differentiates foreign substances or concretions in the bowel. The pictures are taken while the patient is holding the breath.

The author has used this technique in 50 cases 17 have not as yet been operated on. Of the 33 which went to operation he found stones in 20 and the surgeon reported stones in 27. The probability of stones was diagnosed in 20 others which were not found by the surgeon. He thinks his finding of 20 in 27 cases high as in general not more than 50 per cent can be shown. **JOHN G BURKE**

**George A W and Gerbe I.** The Demonstration of Gall-Stones by the Rontgen Ray. *Boston M & S J* 1914, LXII, 680 By Surg Gynec & Obst

The clearness of demonstration of gall stones upon plates will be in proportion to the amount of calcium present. Pure cholesterol stones cannot be differentiated fortunately however they do not cause many chronic disturbances. The technique is very simple. The complicated methods for projecting away the liver shadow are unnecessary. With the patient lying upon the table with his face down the plate is placed under the right hypochondriac region. The maximum of the sharp definition is obtained with a very small diaphragm one and one half inches in diameter and a very small cylinder placed close down upon the back. It is preferable to use a fairly soft tube with a rapid exposure and it is better not to use intensifying screens, but to use the simple plates as in kidney work.

Five case reports are given with plates showing gall-stones and one case of ossified costal cartilage simulating gall stone.

The author believes that the demonstration of gall-stones by the Rontgen ray has already reached a position in this country that warrants its more general use.

It is advisable to examine the gall bladder region for stones prior to every bismuth examination of the alimentary tract. The chief sources of error are renal calculi, ossified mesenteric glands and costo-

chondral ossification. These can be differentiated by proper technique. **D R. BOW**

**Grife G W.** Cholecystectomy vs. Cholecystostomy and a Method of Overcoming the Special Risks Attending Common Duct Operations. *Sh S Gynec & Obst* 914 LXVI, 49 By Surg Gynec & Obst

From a careful study of 832 operations on the biliary tract performed by the author and his associates the following conclusions are drawn:

1. Considering all the later consequences of infection cholecystectomy in the type of cases indicated shows less morbidity than cholecystostomy. In these cases the clinical end results of cholecystectomy are good in unsuitable cases cholecystostomy is followed by recurrent cholecystitis.

2. No adverse effects from cholecystectomy have been seen provided that the division is made at the beginning of the cystic duct that no gall bladder is left and that the division does not at all encroach on the common duct. This technique can be readily carried out.

3. If acute infection be present then in most cases cholecystostomy should be first performed followed if required by a later cholecystectomy.

4. If the gall bladder and the cystic duct be approximately normal then the gall bladder should be left cholecystostomy being the operation of choice. If the gall bladder be thick contain much scar tissue be shrunken show chronic infection of the wall, be much impaired if the cystic duct be partially or completely stricture or if a stone be impacted in the duct then cholecystectomy should be performed.

5. All gall bladder operations and especially common-duct operations, may be performed with a minimum of shock and discomfort by thorough nerve blocking with novocaine by sharp dissection and gentle manipulation.

6. The principal causes of the higher mortality in common-duct operations are the damage done to the nerve supply of the liver and the loss of bile salts. The sharp kelly dissection and the clean simple incision into the common duct with the consequent minimum nerve injury and minimum injury to the duct and its neighborhood and in suitable cases the immediate closure of the common duct by suture will immensely improve the morbidity and the mortality following common duct operations.

7. The mortality rate in the 832 records studied for the purposes of this paper was 7.45 per cent. This mortality rate as well as the post-operative morbidity will be decreased by the application of the technical procedures described above.

**Mayo, C H.** Cholecystitis and the Factors that Control Results of Operation. *J Lencet* 914 XXXI 75 By Surg Gynec & Obst

Mayo notes that the results of operation for cholecystitis are influenced by many conditions

besides those in the gall bladder itself. Among these he enumerates infections within the liver and bile-ducts causing changes in the balance of the acidity of the stomach and of the alkalinity of the duodenum, the presence of pyloric spasm and changes in the pancreas. He calls especial attention to a group of lymphatic glands extending along the common and hepatic ducts and on the cystic duct. He notes that any case of cholecystitis with sufficient infection to produce symptoms will necessarily affect these glands. In the majority of cases if these glands are much enlarged a lymphoedema of the head of the pancreas will be found as well as infection of the gall bladder. An exception is the general swelling of the mesenteric glands through malignancy or gross abdominal infection.

The majority of cases of cholecystitis are undoubtedly best relieved by cholecystectomy.

Mayo W J. Cholecystitis without Stones or Jaundice in Its Relation to Chronic Pancreatitis. *Am J Med Sc* 94 July April.  
By Srg. Gynec. & Obst.

The types of chronic cholecystitis without stones vary in intensity from the mild chronic catarrhal to those characterized by necrosis of the mucous membrane perforation and other manifestations of severe bacterial infection. Not infrequently the condition is associated with appendiceal infections of a chronic character especially those forms of appendicitis in which foreign bodies usually fecaliths are present. Whether or not such appendiceal infections are the direct cause of the infections in the gall bladder has not been determined but it seems possible inasmuch as bacterial or toxic products are picked up in the derivatives of the portal circulation carried to the liver and there destroyed or excreted in a modified form with the bile. When such infected bile is delayed in the gall bladder cholecystitis may result.

The clinical diagnosis of cholecystitis even when stones are present is not always easy. With the palm of the hand an area may be covered which could be involved in pyloric and duodenal ulcer disease of the gall bladder, appendicitis and stones or infections in the right kidney or right ureter. Pain referred to this region may also be due to small ovarian dermoids and early extra-uterine pregnancy. Even when the abdomen is open a gall bladder markedly diseased in its mucous membrane may give little or no evidence of such disease by external examination. The tawny-gall bladder represents the characteristic appearance of the affected lili due to loss of the epithelial covering the connective tissue base being attuned with bile. Removing such a gall bladder gives almost certain relief. The more this condition varies from the normal the less the probability of cure. Cholecystitis if present is so mild as not to cause the symptoms.

In many cases the only way in which a diagnosis can be cast is by the pen and in the pocket the mu-

cosa and often a microscopical examination will be necessary.

If so much uncertainty exists with regard to the gall bladder and its infections much more uncertainty must exist as regards the pancreas and its infections. The sense of sight cannot aid in solving the question as in the examination of the mucosa of the gall bladder and a specimen will probably not be removed for pathologic examination. The diagnosis must be established by the sense of touch and a certain amount of intuition on the part of the diagnostician which unfortunately often plays too large a part in his final judgment. In practicing a routine examination of the contents of the abdomen the author states he has been surprised to find how frequently the pancreas showed enlargement, induration and nodulation which would have justified a diagnosis of chronic pancreatitis if some disease of the biliary tract had been the original lesion but in which there was no symptomatic evidence that pancreatic inflammation existed. Well marked cases of chronic interlobular pancreatitis involving the head and often the entire pancreas present conclusive evidence of pancreatitis. Such extreme evidences of chronic pancreatitis are seldom found without infection of the biliary tract but in cases less marked the evidence is often insufficient to establish the diagnosis especially when neither gall stones nor jaundice are present. There is still another group of cases in which cholecystitis of the chronic type without gall-stones and without jaundice is accompanied by undoubted chronic interlobular pancreatitis. In such cases there is no dilatation of the common duct nor is the gall bladder distended.

In the presence of chronic pancreatitis without jaundice and without evidences of back pressure on the biliary tract the gall bladder should be removed if it shows marked evidence of chronic cholecystitis especially the straw-ry type.

Danila, R. Results of Grafting Blood Vessels on the Bile Passages (Réultat de la greffe de vaisseaux sang. sur les voies biliaires). *Ann Soc Belg d'Ch. Brussels* 93 243.  
By Journal d. Chirurg.

As is operated on two dogs as follows. A rectangular piece was cut from the lower surface of the gall bladder and replaced by a segment from the jugular vein. Three months later he examined the results. The peritoneum was entirely normal, the internal surface of the liver free of adhesions. The gall bladder appeared normal in situation, motility, form, color and size. Its surface was smooth, the graft was not visible. Histologically the wall was of normal thickness, there being no cicatricial tissue. The vein was scarcely changed. It was covered outside by a layer of cells representing a new serous membrane on the interior with a connective tissue and epithelial covering with a structure exactly like that in the rest of the bladder. It was distinguished from the latter only by fewer folds and



by the absence of lymphatic follicles. The process of regeneration was evidently analogous to that seen in injuries of the cornea. The bladder wall considering the vein as a sort of middle tunic had extended its mucous and submucous coats over it and its serous coat under it. Extending from the periphery to the center of the graft this reparation had resulted in a complete *restitutio ad integrum*. The conclusion is drawn from this that vein tissue serves as a perfect graft in the bile passages from the plastic as well as from the functional point of view. J DUMORT

Carrera J. A. Splenectomy in Diseases of the Spleen (*La splenectomía da a les afecciones de la rate*) *This s d doct* Buenos Aires, 914

By Journal de Chirurgie

This important work discusses splenectomy in all the diseases of the spleen for which it has been performed. Interesting anatomical physiological and clinical points bearing on the pathology of the spleen are brought out but the especially interesting portion of it is the résumé of all the cases published in the Argentine Republic from 1898 to 1913 numbering 27. They may be classified as follows:

Lymphosarcoma	1 operation with recovery
Angiosarcoma	1 operation with recovery
Banti's disease	2 operations with death.
Rupture of the spleen	7 operations with 4 recoveries and 3 deaths
Injuries of the spleen	2 operations with 1 recovery and 1 death
Torsion of the pedicle	1 operation with recovery
Malacal splenomegaly	5 operations with recovery
Primary tuberculosis	1 operation with recovery

Leukæmia  
Cancer of the pedicle  
Hydatid cyst  
Splenomegaly

2 operations with death  
1 operation with recovery  
1 operation with recovery  
3 operations with 1 recovery and 2 deaths

The author advises that the patient be placed in the dorsal position inclined toward the side by the aid of Rio Branco's apparatus. He reviews the different incisions but does not express a preference for any one and describes the classical technique for splenectomy. He closes with the advice to lessen the indications for splenectomy as he considers the spleen an important organ. SALVA MERCADÉ

## MISCELLANEOUS

K Lloyd F. S. Ptoisis: a Cause of Gynecological Failure *B N M & S J* 9 4 cliv 646

By Surg. Gynec. & Obst.

The author reports four cases typical of ptosis being a cause of gynecological failure. All these patients were operated upon but they were little relieved. They had symptoms of ptosis when the author saw them. Three of the patients had complained of ptosis previous to operation. They were relieved of all symptoms by mechanical support of the abdomen.

The author enters into a discussion of the diagnosis of this condition and emphasizes the fact that the treatment of uncomplicated ptosis belongs to the orthopedic surgeon. Failure in many cases to secure proper results is due to improperly fitting corsets, insufficient directions and corsets made of relatively cheap stretchable material, which stop doing their work in from four to seven days after being fitted. EDWARD L. CORNELL.

## SURGERY OF THE EXTREMITIES

### DISEASES OF THE BONES, JOINTS, MUSCLES, TENDONS CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Con S. M. Osteomyelitis at the Sacro-Iliac Joint with Gas Bacillus Infection *Am J Orth S* 9 24 21 380

By Surg. Gynec. & Obst.

The author reports a case of gas bacillus infection of the ilium around the sacro-iliac joint in which at autopsy the bacilli were demonstrated in the bone, the muscle and the liver and all the tissues of the body being infiltrated with gas. It is not stated what was the source of the infection in this case but the general statement is made that most of such cases follow an infection of an open wound. The organisms are very seldom found in the blood and only with great difficulty get into the general circulation. In this case there was necrotic bone at the iliosacral region from which the infection started and progressed disastrously. W. A. CLARK

Kilnens, J. Radiographic Diagnosis of Bone Sarcoma (*Le diagnostic radiographique des sarcomes osseux*) *Paris méd* 19 4 1 129

By Journal de Chirurgie

Radiography not only enables us to make a diagnosis of sarcoma of the bone but in many cases aids in determining its point of origin and histological structure. Osteosarcomas are divided into two groups: (1) central or myelogenous sarcomas and (2) peripheral or periosteal sarcomas. All bone sarcomas begin in the diaphysis near the articular cartilage never in the epiphysis. Radiography shows the integrity of the epiphysis separated from the neoplasm by the solid barrier of the articular cartilage.

Peripheral sarcomas generally involve the periphery only while the central ones though they also may develop tremendously just beneath the periosteum, have extended further down so that the distinction between the two is made not by the preponderance of periosteal development but by the

amount of destruction of bone tissue. The periosteum is broken through only in the late stages of the disease. Often a shell impregnated with calcium salts is formed around the tumor whatever its thickness it shows very clearly on the radiographic plate. Sometimes the neoplasm shows bony trabeculae which tend to limit its growth, the peripheral sarcomas especially show this tendency.

Bone sarcomas may be confused in diagnosis with scorbutus, syphilis, chronic arthritis and white swelling. Radiography simplifies the differential diagnosis. In scorbutus the terminal surface of the diaphysis shows an opacity greater or less in extent very intense and irregular in form. This sign is characteristic and often determines the diagnosis without the history or clinical examination. Syphilis may cause more or less destruction of bone by the formation of gummata but it forms more bone tissue than it destroys while the opposite is true of sarcomas.

Syphilis of the diaphysis is characterized by retraction of the medullary canal and the abundant formation of bony lamellae. In the epiphyseal form there are clear spots indicating rarefying osteitis or even small intra-osseous gummata. Chronic arthritis sometimes does not show any appreciable change in the bone sometimes as in arthritis deformans there are numerous small neoplasms at the angles of the pteila and at the edges of the particular cartilage where it is continuous with the periosteum. The synovial form of white swelling is characterized by marked swelling of the joint which is studded with fungosities shows more or less pronounced decalcification and no destruction of bone. The bony form shows lesions of the trabeculae limited, at first at least to the epiphysis.

There are also some sources of error in radiography. The opacity of ossifying sarcomas is sometimes so intense and uniform that all detail is absent and a diagnosis of osteoma might be made if it were not for the history and clinical examination. Some sarcomas escape radiographic diagnosis by the opposite characteristics that is by the absence of ossification and destruction of bone. In a case of subperiosteal hematoma in a child resulting from a traumatism of the thigh Klunens saw a thin but clearly defined shell surrounding the diaphysis of the femur. This shell was formed of calcified periosteum and microscopic examination of it showed there was no sarcoma present. In the majority of cases the radiographic picture of osteosarcoma is pathognomonic, but there are cases where a definite conclusion is impossible.

J. DEMOY

Dax R. Paget's Bone Disease (Über Paget'sche Knochenerkrankung). Berl. M. Ch. 914, 1888, 64.

By Zentralblatt für ges. Chirurg. u. Grenzgeb.

Paget disease or osteitis deformans is a disease of advanced age which progresses slowly and generally causes no other disturbance than that

produced by the deformity of the skeleton. It generally begins in the skull and then affects in succession the tibia, femur, pelvis, spinal column, clavicle, ribs, humerus and radius frequently symmetrically but sometimes unilaterally. The bones become larger and softer bent and misshapen. The spinal column shortens so that the height is decreased. The diaphyses of the long bones are affected the joints are not. The form of the body with its enormous skull and the apparently elongated arms reaching to the knees resembles that of the anthropomorphous apes. There are often pains in the diseased bones — rheumatic, gouty or neuralgic in nature without periodic or nightly exacerbations.

The complications are those to be expected at the age at which it occurs: arteriosclerosis, atheroma, toxaemia, ulcers of the leg, heart affections, lung diseases caused by the limitation of the respiration and very frequently multiple malignant tumors of the bones. Spontaneous fractures are rare in contrast with fibrous osteitis.

Histologically there is diffuse destruction of the bone marrow with fibrous transformation, widening of the Haversian canals, decrease in the lamellae with destruction and new formation of bone substance the former exceeding the latter in degree. The disease has been attributed to heredity, trauma, gout, rheumatism, changes in the nervous system, the influence of the glands of internal secretion, senility and hereditary syphilis but as a matter of fact the etiology is unknown. There is great similarity to fibrous osteitis but in the latter disease there are cysts and tumor formation while in Paget's disease there are only fibrous foci in the bone. Treatment has been without effect except in one case that was treated successfully with calcium lactate. The author in conclusion gives the history of a typical case of his own in a woman 70 years old.

SCHEITZ

Hartung A.: Some Unusual Bone Lesions. Am. J. Roentgenol. 1914, 1, 20.

By Surg. Gynec. & Obst.

The author reports 2 cases of osteitis fibrosa deformans (Paget's disease), one case of osteitis fibrosa or multiple bone cyst and 3 cases of hypertrophic osteoarthropathy of Marie.

In the cases of Paget's disease there was grossly bowing and enlargement of the long bones and hyperostosis and thickening of the flat ones. The minute changes showed a coincident porosis and sclerosis, one or the other processes predominating in different parts. The fine markings ordinarily shown in the cancellous ends of the long bones were replaced by a coarse trabeculation which extended into the shafts. In some cases the process stimulated periosteal thickening; in others, irregular decalcification gave an appearance of caries. Near the distal end of both the ulnae and radii of one case uniform absorption of lime salts of a limited area had occurred resembling cyst formation. In the tibiae of

both cases the lumen of the medullary canal was practically obliterated having been replaced by irregular lamellae of bone.

With the exception of the spine the joints were not involved. The process extended throughout the epiphyses but there was no noticeable irregularity of the joint surface nor was there anything suggestive of atrophy of the joint cartilage.

The skulls of both patients showed well marked and similar changes. The calvarium was markedly thickened especially at the base and an abnormal porosity in places gave it a marked mottled effect. The sella turcica were found to be about normal.

The case of osteitis fibrosa showed a cystic condition in both clavicles, some of the ribs both tibiae, one fibula and one of the metatarsals. Fractures had occurred in both humeri and in both femurs. Most of the tumors showed a localized decalcified area with compartments surrounded by a thin expanded shell of bone. In the right tibia a late picture shows this shell apparently broken and the growth has all the X-ray appearance of sarcoma.

Of the 3 cases of osteoarthropathy of Marie one was tubercular, one clinically tubercular with negative Von Pirquet and Wassermann and one had a clinical diagnosis of probable Hanot's cirrhosis; the lungs were negative. These cases each showed an osteoporosis at its most marked over the metacarpals and metatarsal next in degree at the distal ends of the ulnar radius, tibia and fibula. A similar process extended along the long bones near other bones affected a condition not shown in the description of other cases recorded. Joint surfaces were not found to be involved and clubbing at the ends of the fingers and toes was not accompanied by bone changes. D R B W

Landl F. Central Surgical Bone Disease (Ueber zentrale bruchartige Knochenkrankungen) *Mitt Abh Berl* 1914 2: 269  
By Zentralbl f d ges Chir u Grenzgeb

With the aid of the roentgen picture it is frequently possible to diagnose bone diseases that cannot be differentiated clinically. The author discusses the diseases of the center of the bone that have been recognized thus far. The red lymphatic marrow of youth changes gradually to fat marrow. This is important in the prognosis of fractures at an advanced age for fat embolism is seldom observed in children. But different diseases, such as long rest in bed and ges etc may cause the bone to atrophy, the cortex becomes thin the structure looks transparent and pointed in the roentgen picture and the red marrow is transformed into fatty marrow, the protection against fat embolism has disappeared. On the other hand the lymphatic marrow pool in fat has certain dangers. On account of the presence of numerous blood vessels in the marrow cavity there is a predisposition to bone diseases since it has been bacteriologically demonstrated that the bone marrow is most a suitable infection diseases contains bacteria.

Sometimes there is a phlegmon of the marrow. Here diagnosis is comparatively easy it is more difficult in the chronic forms of osteomyelitis. If there is a cyst with round smooth walls it may be tuberculosis or coccid osteomyelitis although generally in the latter there is new formation of bone because of irritation of the periosteum which is generally lacking in tuberculosis which leads to caseation. In bone syphilis we have multilocular cysts or large granulation tumors originating from the periosteum.

There is a short discussion of actinomycosis and echinococcus. Multilocular cysts are also found in fibrous osteitis while solitary ones are found, among other diseases in myelogenous giant-celled sarcoma. Myelomata do originate from the marrow and sometimes also chondromata when there are small islands of cartilage from the embryonic period remaining in the marrow but these are easily recognized in the roentgen picture by their nodular structure. Cartilaginous exostoses owe their origin to similar islands of cartilage. Osteomata fibromata and myxomata occur more rarely. There is no primary carcinoma of the bone at most an epithelial cancer may arise in bone from proliferation of skin or mucous membrane in fistulae leading into the bone.

Cholesteatomata of the astragalus are interesting from the point of view of the history of development as are also dermoids of the frontal cavity adenomata etc. Not all of these diseases are satisfactorily explained many problems still await solution, as for example the fact that certain carcinomas of the breast and prostate have a special tendency to produce metastases in bone-marrow as do also hypernephromata. Grawitz tumors of the kidney and malignant goiter. KNOX

Vier L. and W. H. Importance of Individual Components of Bone Tissue in the Regeneration and Transplantation of Bone (Neue Versuche zur Frage d. Bedeutung d. einzelnen Komponenten des Knochengewebes bei der Regeneration und Transplantation von Knochen) *Arch f kl Chir* 1914 73  
By Zentralbl f d ges Chir u Grenzgeb

In experiment on dogs freely transplanted periosteum and periosteum after subperiosteal resection (bone reproduced) while there was no growth when the periosteum was removed from the surface of the transplanted bone. If bone transplantation the bone cells showed no new formation of bone while the periosteum was active in this respect and also the endothelial cells of the marrow cavity and the haversian canals. Bone that is macroscopically free from periosteum can be transplanted because it retains the osteoblasts of the cambium layer and the endothelial cells of the marrow cavity and the haversian canals.

From these experiments it follows that in man the bone must always be transplanted with its periosteum at least with as much of the cambium

as possible. A part of the transplanted bone dies another part lives until the transplant is vascularized. The dead bone is partially dissolved by the young bone-cells which form new bone at the same time which is gradually substituted for the old and penetrates into the old empty bone cavities.

KIRSCHNER

Walther H W E.: Gonorrheal Metastatic Arthritis. *Boston M & S J* 19 4 clxx 561.  
By Surg. Gynec. & Obst.

The author reviews some of the more recent literature concerning metastatic gonorrheal arthritis. Infection of this type usually takes place after the acute urethral manifestations although this is not always the rule. Two cases cited occurring in from 13 to 21 days. Thirty per cent involve one joint 70 per cent are polyarticular. The knee, ankle and wrist joints are most commonly involved.

The types of infection are

- 1 Arthralgia without definite lesions in the joint
- 2 Acute serous synovitis with much periarticular swelling
- 3 Acute fibrinous and plastic synovitis with slight effusion
- 4 Chronic serous or purulent synovitis
- 5 Involvement of bursae and tendon sheaths

Treatments consisting of injection of 2 per cent formalin and glycerine, seminal vesiculotomy, actual cautery, blood letting, aspiration and the usual applications, prostatic massage, Bier's bandage, lead and opium ice caps, packs, saturated solution of magnesium sulphate and Ichthyol, are recommended. Serotherapy and vaccine therapy are yet of doubtful value. Autogenous vaccines appear more efficient.

Surgically the infection has been treated with more or less success by (1) aspiration (2) aspiration and antiseptic injection (3) incision, irrigation and drainage and (4) seminal vesiculotomy.

The latter has not been accepted by most conservative surgeons but if the focus lies in the seminal vesicles the present trend will probably demand its more common use.

H W MEYERDING

Lehmann E.: Post Traumatic Ossification in the Region of the Elbow-Joint. (Posttraumatische Ossifikation im Gebiete des Ellenbogengelenks). *Dtsch. Zeitschr. f. Chir.* 9 4 clxxv 3.  
By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The first cases of myositis ossifica that were observed in the region of the elbow joint were all connected with posterior dislocation and so were regarded as a consequence of that injury. Machol in 1908 and others afterward assumed that the replacement of a posterior dislocation as a rule caused a circumscribed ossification in the musculature of the elbow. But even if such a connection exists the author believes that there must be other factors of more general nature producing ossification.

for it has been found after other injuries than dislocation and has been lacking in dislocations of other joints as it is found only very rarely in any other joint.

The author has collected 37 cases of ossification of the elbow joint from 1902 to 1910 and publishes the case histories. The roentgen pictures are very interesting and all of them show bone proliferation in the brachialis anticus and some of them at the insertion of the triceps from the size of a cherry up. The epiphysis and sometimes also the diaphysis of the humerus was surrounded by masses of callus. By no means all of these appeared after dislocations in fact posterior dislocation occurred in only 19 cases, some of them came after fractures or even simple sprains. There was always a trauma of some sort though in some cases it was very slight.

Lehmann does not answer the question of whether the bone proliferation originated in the muscle or periosteum because the osteoblastic form originating from periosteum and the metaplastic originating from connective tissue appeared side by side. But there was certainly some purely intramuscular proliferation of bone without participation of the periosteum. As evidence he cites the roentgen pictures and the findings on operation where bone and periosteum were found completely intact.

Several factors are brought forward as possible causes of the ossification of the soft parts: first that the anatomical form of the elbow with its various projecting ends of bone renders it specially liable to mechanical injury, hemorrhage plays a certain part in the formation of new bone and also the synovial membrane. But there is still the question of why ossification should occur so often in the elbow and not in other joints. It cannot be explained without the hypothesis of individual predisposition.

As to clinical course and diagnosis the author with others believes unreservedly in conservative treatment for these bone proliferations tend to disappear spontaneously. It is especially important in treating recent injuries to avoid all forced movements. The prognosis depends on the kind of proliferation, its size and location and its capacity for absorption.

KNOKE

Leonhard: Treatment of Tuberculosis of the Shoulder, Elbow and Wrist Joints and Its Results. (Über die Behandlung der Tuberkulose des Schulter-, Ellenbogen- und Handgelenks und ihre Erfolge). *Betr. d. Chir.* 19 3 clxxv 195.  
By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author collected the results that have been obtained for the past 19 years at Garre's clinic in the treatment of tuberculosis of the upper extremity. Of 145 cases treated 25 were tuberculosis of the shoulder, 79 of the elbow and 41 of the wrist joint. The treatment was individualized according to the anatomical location and the function of the joint. The average age of the patients with shoulder joint tuberculosis was 27 3 years.

In the etiology the disease was reported as spontaneous

both cases the lumen of the medullary canal was practically obliterated having been replaced by irregular lamellae of bone.

With the exception of the spine the joints were not involved. The process extended throughout the epiphyses but there was no noticeable irregularity of the joint surface nor was there anything suggestive of atrophy of the joint cartilage.

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Landois F. Central Surgical Bone Disease (Über centrale chirurgische Knochenkrankungen) Med. Abh. Berl. 94, 269.  
By Zentralblatt für ges. Chir. u. Grenzgeb.

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Sometimes there is a phlegmon of the marrow. Here diagnosis is comparatively easy it is more difficult in the chronic forms of osteomyelitis. If there is a cyst with round, smooth walls it may be tuberculosis or coccus osteomyelitis, although generally in the latter there is new formation of bone because of irritation of the periosteum which is generally lacking in tuberculosis which leads to caseation. In bone syphilis we have multilocular cysts or large granulation tumors originating from the periosteum.

There is a short discussion of actinomycosis and echinococcus. Multilocular cysts are also found in fibrous ostitis while solitary ones are found among other diseases in myelogenous giant celled sarcoma. Myelomata also originate from the marrow and sometimes also chondromata when there are small islands of cartilage from the embryonic period remaining in the marrow but these are easily recognized in the roentgen picture by their nodular structure. Cartilaginous exostoses owe their origin to similar islands of cartilage. Osteomata fibromata and myxomata occur more rarely. There is no primary carcinoma of the bone at most an epithelial cancer may arise in bone from proliferation of skin or mucous membrane in fistulae leading into the bone.

Cholesteatomata of the astragalus are interesting from the point of view of the history of development as are also dermoids of the frontal cavity adamantomata etc. Not all of these diseases are satisfactorily explained many problems still await solution, as for example, the fact that certain carcinomata cancer of the breast and prostate have a special tendency to produce metastases in bone-marrow as do also hypernephromata. Gravitational tumors of the kidney and malignant goiter. KNOX.

Mayer L. and W. Hun E. Importance of Individual Components of Bone Tissue in the Regeneration and Transplantation of Bone (Neue Versuche zur Frage der Bedeutung der einzelnen Komponenten des Knochengewebes bei der Regeneration und Transplantation von Knochen) Arch. f. H. Ch. 94, 4, 73.  
By Zentralblatt für ges. Chir. u. Grenzgeb.

In experiments on dogs freely transplanted periosteum and perosteum after subperiosteal resection of bone reproduced bone while there was no growth when the periosteum was removed from the surface of the transplanted bone. In bone transplantation the bone-cells showed no new formation of bone while the periosteum was active in this respect and also the endothelial cell of the marrow cavity and the haversian canals. Bone that is macroscopically free from periosteum can be transplanted because it retains the osteoblasts of the cambium layer and the endothelial cells of the marrow cavity and the haversian canal.

From these experiments it follows that in man the bone must always be transplanted with its periosteum or at least with as much of the cambium

as possible. A part of the transplanted bone dies another part lives until the transplant is vascularized. The dead bone is partially dissolved by the young bone-cells which form new bone at the same time which is gradually substituted for the old and penetrates into the old empty bone cavities.

KRASCHEVA.

Walther H. W. E.: Gonorrheal Metastatic Arthritis. *B. M. & S. J.* 1914 clxx 561.  
By Surg. Gynec. & Obst.

The author reviews some of the more recent literature concerning metastatic gonorrheal arthritis. Infection of this type usually takes place after the acute urethral manifestations, although this is not always the rule. Two cases cited occurring in from 13 to 21 days. Thirty per cent involve one joint, 70 per cent are polyarticular. The knee, ankle and wrist joints are most commonly involved.

The types of infection are:

- 1 Arthralgia without definite lesions in the joint
- 2 Acute serous synovitis with much periarthritic swelling
- 3 Acute fibrinous and plastic synovitis with slight effusion
- 4 Chronic serous or purulent synovitis.
- 5 Involvement of bursae and tendon sheaths

Treatments consisting of injection of 2 per cent formalin and glycerine seminal vesiculotomy, actual cautery blood letting, aspiration and the usual applications, prostatic massage, Biers bandage, lead and opium ice caps, saturated solution of magnesium sulphate and ichthyol, are recommended. Serotherapy and vaccine therapy are yet of doubtful value. Autogenous vaccines appear more efficient.

Surgically the infection has been treated with more or less success by (1) aspiration, (2) aspiration and antiseptic injection, (3) incision, irrigation and drainage, and (4) seminal vesiculotomy.

The latter has not been accepted by most conservative surgeons, but if the focus lies in the seminal vesicles the present trend will probably demand its more common use.

H. W. MEYERDING.

Lehmann E.: Post-Traumatic Ossification in the Region of the Elbow Joint. (Post-traumatische Ossifikationen im Gebiete des Ellenbogengelenks). *Deutsches Archiv für Klinische Medizin* 1914, clxxvii, 3.  
By Zentralblatt für Gesamte Chirurgie.

The first cases of myositis ossificans that were observed in the region of the elbow joint were all in connection with posterior dislocation and so were regarded as a consequence of that injury. Michol in 1908 and others afterward assumed that the replacement of a posterior dislocation as a rule caused a circumscribed ossification in the musculature of the elbow. But even if such a connection exists the author believes that there must be other factors of a more general nature producing ossi-

fication for it has been found after other injuries than dislocation and has been lacking in dislocations of other joints as it is found only very rarely in any other joint.

The author has collected 37 cases of ossification of the elbow joint from 1901 to 1910 and publishes the case histories. The roentgen pictures are very interesting and all of them show bone proliferation in the brachialis anticus and some of them at the insertion of the triceps from the size of a cherry up. The epiphysis and sometimes also the diaphysis of the humerus was surrounded by masses of callus. By no means all of these appeared after dislocations in fact posterior dislocation occurred in only 19 cases, some of them came after fractures or even simple sprains. There was always a trauma of some sort though in some cases it was very slight.

Lehmann does not answer the question of whether the bone proliferation originated in the muscle or periosteum because the osteoblastic form originates from periosteum and the metaplastic, originating from connective tissue appeared side by side. But there was certainly some purely intramuscular proliferation of bone without participation of the periosteum. As evidence he cites the roentgen pictures and the findings on operation where bone and periosteum were found completely intact.

Several factors are brought forward as possible causes of the ossification of the soft parts: first that the anatomical form of the elbow with its various projections of bone renders it especially liable to mechanical injury, hemorrhage plays a certain part in the formation of new bone and also the synovial membrane. But there is still the question of why ossification should occur so often in the elbow and not in other joints. It cannot be explained without the hypothesis of individual predisposition.

As to clinical course and diagnosis the author with others believes unreservedly in conservative treatment, for these bone proliferations tend to disappear spontaneously. It is especially important in treating recent injuries to avoid all forced movements. The prognosis depends on the kind of proliferation, its size and location, and its capacity for absorption.

KNOKE.

Leonhard: Treatment of Tuberculosis of the Shoulder, Elbow and Wrist-Joints and Its Results. (Über die Behandlung der Tuberkulose des Schulter-, Ellenbogen- und Handgelenks und ihre Erfolge). *Beitrag zur Klinik der Chirurgie*, 1914, 5.  
By Zentralblatt für Gesamte Chirurgie.

The author collected the results that have been obtained for the past 9 years at Garre's clinic in the treatment of tuberculosis of the upper extremity. Of 45 cases treated, 5 were tuberculosis of the shoulder, 79 of the elbow and 41 of the wrist-joint. The treatment was individualized according to the anatomical location and the function of the joint. The average age of the patients with shoulder joint tuberculosis was 27.3 years.

In the etiology the disease was reported as respon-

taneous in 17 cases due to trauma in 3 and hereditary taint in 3. The diagnosis may be confused with osteomyelitis, syphilis and arthritis deformans. In 31.5 per cent of the cases the disease was in the humerus alone, in 10.5 per cent in the articulation between the clavicle and acromion process, in 11 per cent in the glenoid cavity of the scapula and in 47 per cent the whole shoulder joint was involved. There was anæmia in 12.5 per cent.

The treatment was conservative consisting of injections, Bier's hyperæmia, hot air and rest. If this was not successful excochleation or even resection was performed. Eight cases were treated conservatively, excochleation was done in 5 and resection in 12.

The author comes to the conclusion that the resected cases gave the best permanent results. The etiological factors were the same in tuberculosis of the elbow joint as in the shoulder joint. The entire joint was involved in 60.3 per cent of the cases.

Garré believes that in children it should be treated conservatively by placing the arm at rest in the right-angled position while in adults resection should be performed. Resection was performed in 34 cases and the immediate and late results were the best in these cases. Excochleation was performed 20 times and 5 of these cases recovered completely. Amputation was performed in 4 cases.

Of 40 cases of wrist joint tuberculosis which were treated, 22 were in males and 18 in females. The right hand was chiefly involved in the males. The males were attacked with tuberculosis of the wrist joint at a more advanced age than in the other two joints. The treatment was as conservative as possible and when operation was performed the neighboring tissues were spared whenever feasible, only the diseased tissue being removed and conservative after treatment given. In tuberculosis of the wrist joint no really satisfactory results were obtained, either immediate or late, nor was the function restored, so that tuberculosis of this joint offers the worst prognosis of all the forms of joint tuberculosis both as to life and function.

VORSCHEZ.

Allison N. Tuberculosis of the Hip: an Analysis of Twenty Five Selected Cases. *T Am Orth As Phila.* 9.4 June. By Surg. Gynec. & Obst.

The purpose of the article is to consider the relative value of prolonged traction and prolonged fixation in tubercular hip disease. The literature is briefly reviewed. Bradford's traction splint was used on fourteen cases and fixation plaster of Paris applied on five. These cases are reported after a sufficient period of time has elapsed to justify the conclusion that the disease process has healed and the results obtained are ultimate in so far as the hip is concerned. The cases are studied from the standpoint of shortening motion and deformation. The results are checked by frequent radiograms.

The average shortening where plaster of Paris spicas were used was 1.45 inch, where the Bradford

traction-abduction splint was used it was .56 of an inch. Where plaster of Paris spicas were used the average atrophy of the thigh was 1.47 inch and of the calf one half inch, where the Bradford traction-abduction splint was used the average atrophy of the thigh was 1.27 inch and of the calf .76 of an inch. From this latter observation the conclusion may be drawn that the use of traction does not materially increase the amount of atrophy. Motion was preserved in all the hips treated with traction-abduction splint and was lost in 60 per cent of the cases treated with plaster of Paris spicas.

The author is led to conclude further that in any treatment given tuberculosis of the hip it is essential that the case under treatment be very carefully watched. This is most easily done where it is necessary to observe the case frequently a condition made necessary by the care of the traction splint.

Abcesses have occurred in 33.3 per cent of the cases treated with plaster of Paris spicas and in 40 per cent of the cases treated with traction-abduction splints.

Rogers, M. H.: Tuberculosis of the Knee in Adults: Prognosis and Treatment. *T Am Orth As Phila.* 9.4 June.

By Surg. Gynec. & Obst.

The author reports the cases of tuberculosis of the knee in adults at the Orthopedic Clinic of the Massachusetts General Hospital during the last fourteen years. He compares the nature of the disease and the results of treatment with similar statistics from certain children's clinics.

One hundred consecutive records of tuberculosis of the knee were studied to ascertain the results of the most common form of treatment, fixation by means of plaster of Paris bandages, there being no record of a case cured by the conservative method.

Twenty-six cases were studied very thoroughly during the last four years, all of them being subjected to operation, and it was found that as far as can be proved clinically all but one case had its origin in the synovia, which is contrary to the ordinary conception that tuberculosis starts near the epiphysis and extends to the capsule secondarily.

The conclusions as to treatment are that conservative methods do not show good results, that excisions when performed after there is marked destruction of the joint cause a slow convalescence, that better results will be obtained if an excision is done as early as the diagnosis can be made positively, that it is often necessary to perform exploratory arthrotomy to make a positive diagnosis.

Hayem L. Penetrating Injuries of the Knee-Joint (Les plaies pénétrantes de l'articulation du genou). *Thèse de doc. Pa.* 1914. By Journal de Chirurgie.

The author's work considers only injuries to the knee in civil life. They are more serious than is generally believed and of the cases considered in this thesis not one escaped surgical intervention. The functional result was certainly better in the

cases operated upon early. The three deaths were in patients operated on late from the fourth to the tenth day. In one case there was resection of the knee with recovery. All the others were treated by extensive arthrotomy. The conclusions reached are:

1. In slight joint injuries immediate arthrotomy should be performed if there is a foreign body arthrotomy within the first twenty-four hours if there is distention of the synovial sac; in other cases the surgeon should be ready to intervene at the first sign of joint infection.

2. In large injuries drainage should be freely used after excision of the contused tissues.

3. In case of persistent suppuration and aggravation of the general condition, resection of the knee-joint should be performed without hesitation.

LÉON LIGIER

### FRACTURES AND DISLOCATIONS

Moore J. E. Fractures of the Neck of the Femur. *Old Dominion J.* 9 4 xvii, 35.

By Surg. Gynec. & Obst.

The author advocates very warmly the so-called anatomical method of Maxwell of treating fractures of the hip. He states that Maxwell, Ruth, Whitman and others have demonstrated the fact that fractures of the neck of the femur can be treated about as successfully as those of the shaft and that the practically hopeless prognosis as to function given in most textbooks is based on the results of the older methods of treatment.

The reason for the failure of the old method lies in the fact that the fragments are not brought into apposition. Maxwell's method in brief consists in adding a side pull to the Buck's extension on the result of the two pulls being a pull outward in the long axis of the neck of the femur thereby rendering the capsule tense and bringing the fragments into proper relation.

The method allows full control of the limb so that the tendency to eversion may be easily corrected. Slight flexion movement of the knee is possible which in older people is of especial advantage in preventing ankylosis. The patients are allowed and encouraged to sit up in bed and there is no danger of disturbing the fragments because the head rotates in the acetabulum. This adds much to the comfort of the patients and prevents hypostatic pneumonia. The author believes that while Whitman's method of extreme abduction and attention in plaster is undoubtedly the best for children, Maxwell's method is to be preferred for adults because it is more comfortable and conveniently applied.

F. J. GARNSEN

Scott H. A. A Treatment of Fractured Femur. *J. Ohio St. U. Med.* 9 4 462.

By Surg. Gynec. & Obst.

The treatment of fractures of the femur by means of Brown's modification of the Hodggen splint is described. The splint is recommended because it

is cheaply and easily made, it is easy to apply and keep in order, it is comfortable for the patient, and the results are perfect in almost every case. The patient sits up in bed from the time the splint is applied. The author especially recommends its use in the treatment of intracapsular femur fractures.

A Buck's extension is applied to the leg and attached to the distal end of the splint. Thus holds the leg well down in the splint and is also the means of applying traction. The splint containing the leg is suspended from the ceiling so that it hangs freely at all times. By adjusting the straps or cords the eversion is slightly overcorrected and the longitudinal axis of the leg is preserved. Abduction is produced by pushing the bed to one side. R. O. RITTER

Parthenay C. de. Treatment of Fractures of the Leg by the Ambulant Method (Contribution à l'étude du traitement des fractures de jambe par la méthode de marche directe). *Thèses de doct.* Par 9 4. By Journal de Chirurgie.

The author reviews the various methods of treating fractures of the leg with special consideration of the ambulant treatment. He describes in detail Guillot and Boissière's bivalve apparatus and Delbet's apparatus. The advantages of the former are its removability, the possibility of dressing the wound of an open fracture and the possibility of removing the apparatus at night about the twentieth day, also the possibility of giving the patient other treatment such as massage, electricity and hot air, and the fact that a sufficient degree of pressure can always be preserved by tightening the crepe bands even after the disappearance of the oedema.

The simplicity of Delbet's apparatus is emphasized. It can be applied in most fractures of the leg even when low down; it permits inspection of the site of the fracture but has to be changed two or three times as the oedema decreases. Twenty-three cases of fracture of the leg treated by this method are reported, 16 of them with Delbet's apparatus. Unfortunately the histories are too brief to be valuable as statistics. Six of the cases were fracture of the tibia in children from 6 to 16 with very little displacement. In 7 cases Guillot and Boissière's apparatus was used, one was a compound fracture of both bones of the leg, but the apparatus was applied only 6 months after the accident because a fistula persisted. The other 6 cases were oblique fractures of the tibia with fracture of the fibula but with little or no displacement. The apparatus was applied soon after the accident and the results were satisfactory; the patients being able to resume their work very soon. L. CAFFERTY

Ansloetti G. Study of Anterior Dislocation of the Head of the Radius (Contribution à l'étude de luxation ténueuse de la tête du radius). *Reforma med.* 9 4 xxx 89. By Journal de Chirurgie.

The first case reported was a recent forward dislocation of the head of the radius. A boy of 8



while carrying his little brother on his back fell and struck on his elbow Examination an hour later showed (1) Decrease of the transverse diameter (2) increase in the anteroposterior diameter (3) the bony projection of the head of the radius could be felt and movements of the diaphysis communicated to it (4) complete extension was impossible and flexion could not be carried to more than a right angle Radiography confirmed the diagnosis of dislocation without fracture of the ulna Reduction was easy by hyperextension and traction on the forearm while the head of the radius was pushed toward its cavity There was slight compression on the head of the radius and immobilization in a position of extension There was such severe pain in the forearm that it was necessary to open the apparatus A diagnosis of radial neuritis was made, which was overcome by massage hot baths and electrical treatment Radiography 10 days later showed good reduction

The second case was an old dislocation of the head of the radius A boy of 7 had fallen with his arm in forced extension a year before When he entered the hospital there was valgus of the elbow to 155 degrees a spherical tumefaction which was the head of the radius limitation of extension flexion was possible barely to a right angle Radiography confirmed the diagnosis The head of the radius was resected and the arm immobilized in extension for 12 days The result was excellent as flexion and extension became normal

The author emphasizes the possibility of injury to the radial nerve In old luxations he thinks the new joint that is formed often permits almost all the necessary movements without any operation In recent dislocations radiographs should always be taken He believes that reduction should be maintained by immobilization in extension and moderate supination At the same time there should be slight pressure on the head of the radius If this is not sufficient open operation must be performed In old dislocations the operation of choice is conservative resection which gives good results and allows the development of the function of the joint

CH VILLANDRE

De Smeets: An Unusual Luxation of the Metacarpals (Une luxation rare des métacarpiens)  
*Annec d' med & Chir* 9 31 437

By Journal de Chirurgie

De Smeets describes a curious lesion which he has not found described anywhere in medical literature and which he therefore considers, if not unique at least extremely rare A man of 25 had been treated for an open fracture of the middle third of the leg by careful disinfection with tincture of iodine immobilization and massage He had left the hospital at the end of three weeks apparently completely cured but returned about three weeks later He walked perfectly as well as before the accident but he complained of a painful sensation in the sole of the foot at the head of the third metatarsal The

pain was not very acute and was produced by pressure of the foot on the ground.

Upon examination it developed that the patient had had another injury which had not attracted the least attention during his stay in the hospital There had been complete luxation of the fifth and seventh metacarpals one under the other upwards and fracture of the head of the third metatarsal Radiography confirmed these facts A very remarkable feature was that while the metatarsals were displaced inwards the phalanges of the toes were in an absolutely normal position The lesions seemed to indicate that the foot had suffered considerable violence at the external surface of the row of metatarsals while the toes were fixed in some fashion so that they could not follow the impulse

The patient had never complained of his foot all the manipulation in reducing the fracture had not caused any pain in that region although the physician who cared for him at the time of the accident said that his shoe had been torn into shreds The author has him under observation and if the pain increases, a greater or less part of the dislocated metatarsals will doubtless have to be resected

J DROUOT

Feldmann A. A Case of Central Luxation of the Femur (El Fall von Luxation femoris centralis)  
*Dissectal o Halle* 913 By Journal de Chirurgie

Central dislocation of the femur—that is the penetration of the head of the femur through the perforated acetabulum into the pelvis—is one of the rarest dislocations of the hip joint In all cases it is caused by great violence It is purely traumatic The first symptom is the position of the hip on the affected side

In the author's case there was flexion and outward rotation In other cases the position is different Sometimes abduction and outward rotation sometimes adduction and outward rotation In all cases there is outward rotation Replacement is typically easy and generally not very painful but after the cessation of the force that has restored the leg to position it slowly settles back into the faulty position Treatment is uncomplicated central dislocation consists chiefly in replacing the displaced head of the femur The prognosis should be guarded

FERTZ LORE

## SURGERY OF THE BONES, JOINTS ETC

Morestin H. Disarticulation of the Hip with Resection of the Acetabulum in Old Cases of Coxalgia (Disarticulation d la hanche avec résection d coxyle dans les arthroses coxalgiques)  
*Bull et mem Soc nat d Par* 9 3 308  
 By Journal de Chirurgie

The author reports two cases of resection of the hip and acetabulum in two patients one of whom had had a fistulous coxalgia for 14 years, the other for 10 years had had a coxalgia which had apparent

ly recovered but had recently been complicated by a fracture of the femur. In both cases function was destroyed and the diseased limb was troublesome and dangerous.

The operative technique was practically the same in both cases. The limb was placed in a position of flexion adduction and internal rotation and a racquet-shaped incision made with the handle of it externally beginning in the posterior part of the iliac fossa and descending to the trochanter or a little below. The body of the racquet was almost transverse and passed inside at a little distance from the perineal groove. The section of the soft parts was made from behind forward. The chief difficulty encountered was in the femoral ankylosis. After section of the peritarticular adhesions great force was necessary to free the head of the femur from the pelvis. The violent blows that were necessary produced symptoms of shock in the patients who grew pale the pulse became feeble and then imperceptible. The operation was completed by resection of the acetabulum with the saw scissors and hammer and especially the gouge forceps which avoided the necessity of any further shock. The results were excellent not only in these cases but in 3 others operated upon by the author.

P. Massov

**Rogers J. Autogenous Bone-Grafting for Fracture of the Patella.** *A S S G Phila* 914 lx 483

By Surg. Gynec. & Obst.

Rogers reports two cases of fracture of the patella treated by bone transplantation. The bone-graft one and one half inches by three-fourths inch by one eighth inch thick with periosteum being obtained from the patient's own tibia on the affected leg. This bone was placed longitudinally bridging the fractured line in the patella. In one case after eight weeks there was an apparently perfect result and in the other the result seemed perfect after a splint had been worn for six weeks.

M. S. Henderson

**McWilliams G. A: Methods Suggested for Bone Transplantations.** *A S S G Phila* 914 lx 465

By Surg. Gynec. & Obst.

McWilliams reports that in a series of experiments every graft covered with periosteum lived while of twenty five grafts made without periosteum only 48 per cent lived. He concludes that the blood supply is the all important feature and that inasmuch as the periosteum plays an important part in the blood supply it should always be preserved. Minute fragments of a living graft transplanted without the periosteum by his experiments are successful in 50 per cent of cases. The same amount of bone in one large piece deprived of its periosteum McWilliams says would not be so apt to live. He says periosteum alone when transplanted into soft parts may produce living bone. He thinks MacEwen and Murphy are mistaken in their conceptions of the

lack of function of the periosteum in maintaining the life of the grafts.

The remainder of the paper is interesting but does not readily permit of abstracting. Under the head of general principles he emphasizes the necessity of asepsis autogenous transplantation avoiding the introduction of wires, nails, screws etc. where possible and absolute fixation of the limb for five months. Technique and cases from the literature are cited to prove the points. M. S. Henderson

**Serafini G. An Attempt to Replace the Upper Extremity of the Humerus by a Graft of Dead Human Bone in a Case of Resection for Sarcoma.** (*Considérations sur une tentative de remplacement de l'extrémité supérieure d'un humérus par une greffe humaine des os morts dans un cas de résection de l'extrémité supérieure de l'humérus pour sarcome*) *Pol d. Roma*, 1914 xli 23

By Jo. mal de Chirurgie

Five cases are reported in the literature of bone-grafts to replace parts of the humerus resected for various kinds of tumors. Lesur's case is the only one of these that was successful. The patient recovered the graft was well borne and the shoulder function was preserved. In the 4 other cases the graft was discharged or had to be removed. This new case of Serafini is therefore of great interest.

A young man of 16 had a round-celled sarcoma near the surgical neck of the humerus but the shoulder joint was intact. Bajardi resected 17 cm. of the humerus, including the head of the bone. The incision was carried into tissue that was apparently normal about three finger breadths below the tumor. This long segment of humerus was immediately replaced by a piece of the same length which was fixed to the distal end of the humerus by bone wedges. It had come from the body of a man of 60 with carcinoma who had died from surgical shock 27 hours before. It had been removed carefully, the skin of the arm was disinfected with tincture of iodine and the same precautions exercised as in an operation on a living subject. The bone was rapidly removed with its periosteum the marrow extracted with a curette the bone immersed in Ringer's solution and kept at a temperature of 3° C. It was used three hours after removal. Cultures had been made to prove that the periosteum and marrow were perfectly sterile. The tendon of the pectoralis major was reinserted on the graft.

The patient bore the operation well. The wound healed by first intent on. In the first 12 days the temperature varied from 37.3 to 39.3° the pulse between 86 and 120. The graft seemed to have taken and on the twenty-seventh day the limb was moved. A fistula opened at the lower part of the incision on the twenty-ninth day from which a purulent liquid was discharged. The patient left the hospital the thirty-fifth day with the fistula persisting. He returned five days later with the fistula closed but with a recurrence of the sarcoma in the remaining segment of the humerus and

metastases. He died the eighty fifth day. Radiographs taken the thirtieth day showed rarefaction of the spongy tissue of the graft. Autopsy showed that the graft was dead it was surrounded by a thick grayish connective-tissue membrane but there was no reunion between the two segments of the humerus there was no trace of callus. Under the microscope there were undoubted signs of necrosis.

PERRAZ FARNET

Henderson M S: The Treatment of Ununited Fractures of the Tibia by the Transplantation of Bone. *A Surg Phila* 1914 lx 486

By Surg Gynec & Obst.

Nine cases of ununited fracture of the tibia are reported one recent but in the remaining 8 cases sufficient time had elapsed since the operation to give a perfect functional result. All were males. Syphilis was ruled out in all but one case and that was contracted after non-union had existed for one year.

The inlay and not the intramedullary method was used in all the cases and is advised as a more anatomical operation. All healed without sepsis though in two cases slough of the old scar caused an ulcer which stayed clean and granulated over. It would seem as if the transplanted bone observed by subsequent X ray pictures lives and functions without being replaced by new bone when implanted by the inlay method, for then there is periosteum of the graft to periosteum of the shaft and cortex to cortex, and medullary lining to medullary lining. A piece of cortical bone placed in the medulla is slowly absorbed for here it is practically a foreign body.

The technique is simple. Either by the aid of the chisel or the motor propelled circular saw a piece of bone is removed from the internal flat surface of the tibia. The bone should be of sufficient length to make a substantial bridge usually 2 or 3 inches long and about one half inch wide and should include all the layers. This is taken from the longer fragment. A piece the same width in the same line is then removed from the smaller fragment. This is saved. The larger piece of transplant is then inverted so that sound bone will bridge the line of fracture. The part which was the upper end fits into the angle distal to the fracture in the smaller fragment. The piece removed from the smaller fragment is then used to fill the remaining gap in the longer fragment. Both pieces are sewed in by stitching the periosteum of the transplant to the periosteum of the shaft. The skin is then closed with silk worm and horsehair and the dressing applied. A plaster of Paris cast is applied to include the knee and ankle. This is removed at the end of two weeks the sutures are removed and a new cast put on which is left from four to six weeks.

Further treatment is guided by the individual needs. Union is usually firm enough to permit walking in from 3 to 6 months.

Robinson E F: Treatment of Ununited Fractures of Tibia by Intramedullary Bone Transplants. Report of Five Cases. *A Surg Phila*, 1914 lx, 495

By Surg Gynec & Obst.

Within the last year Robinson has successfully treated five cases of ununited fracture of the tibia by bone transplantation. In giving the possible cause of non union he advances the theory that a thrombus forms in the nutrient artery of the tibia. This non union is more likely to occur he thinks in the upper or middle third for the nutrient artery enters this area. In consequence of this impaired nutrition the process of bone repair is so delayed that connective tissue is interposed and forms a permanent block to the bridging across the gap by the Haversian system of osteoblasts. He thinks that the transplant acts as an osteoconductive structure and heaves the periosteum where possible. He has used the intramedullary method in all the cases, first freshening up the ends of the fracture and reaming out the medulla. He reports bony union in one case in less than a month in another bony union at the end of seven weeks and another at the end of twelve weeks. Autogenous transplants were used, and all were obtained from the opposite tibia.

M S HENDERSON

Lovett R. W.: The Use of Silk Ligaments in Paralysis of the Ankle. *T Am Orth A Phila* 19 4 June

By Surg Gynec & Obst.

In view of the contradictory statements with regard to the value of the silk ligament in cases of infantile paralysis causing foot-drop, 79 operations performed at the Children's Hospital, Boston from the years 1907-1913 inclusive were analyzed from the view of the end results. The end results were considered as valid only after the lapse of a year after operation.

An analysis of these figures showed that occasional infection had occurred but not since 1911 and that this trouble had occurred with all methods of preparation of silk, so that it was not fair to attribute it to the use of silk prepared by any one formula but to some difference in the technique of the individual operator.

The percentage of success seemed to be largest in the cases where the bone was drilled, and this operation seems to be preferable to that where a penosteal insertion of the silk only is aimed at.

Cases are kept in plaster for from three to six months, and in a retention shoe until a year after operation. It seems probable that many failures occur from allowing the unsupported weight of the foot to come too soon on the silk. It must be remembered that the silk is intended not as a supporting structure in itself but merely to serve as the core for a ligament which is the real supporting structure.

The conclusion is presented that the operation is a useful one in properly selected cases and in the majority of cases the results are satisfactory.

## ORTHOPEDICS IN GENERAL

**Gelst E. S    The Use of Celluloid Foot Plates.**

Am J Orth S 1942; 398

By Surg Gynec. &amp; Obst

The author following an idea obtained at Lange's clinic in Munich uses celluloid for arch supports

The thick celluloid solution in commercial acetone is applied over a plaster model of the foot alternately with heavy tape and steel strips the latter placed longitudinally. After twenty four hours it is dry and is removed and trimmed. It is claimed for such plates that they are light in weight inexpensive easily made and fit accurately. W. A. CLARK.

## SURGERY OF THE SPINAL COLUMN AND CORD

**Adams Z B The Relation of Bony Anomalies of the Lumbar and Sacral Spine to the Cause and Treatment of Scoliosis T Am Orth A**

Phila 1914 June

By Surg Gynec. & Obst.

The paper is founded on statistics from the routine clinic of scoliosis at the Massachusetts General Hospital. An inspection of the X ray plate shows that 6 per cent of this series being infantile paralysis had symmetrical sacra, with the spine sagging from the top due to the letting off of the stays of one side of a compound mast, 6 per cent were due to lesions in the dorsal spine blind bodies etc and showed symmetrical sacra with the lumbar spine sagging and rotated 88 per cent showed congenital defects in the sacrum or low lumbar vertebrae. These defects were due to errors in fusion or development of the centers of ossification or of their processes.

From this study it is concluded among other things, that a careful X ray investigation is essential before any attempt at treatment of lateral curvature. In each case the mechanics of this part of the spine should be carefully considered for anomalies of this region are frequent without any scoliosis.

The study also shows that in some cases, correction cannot be obtained until the bony obstacle to such correction has been removed that in many other cases an operation must follow correction in order to obtain and maintain a stable base on which the spine may rest.

In the early cases exercises should be directed to reducing the anterior lumbar lordosis thus diminishing the downward inclination of the upper surface of the sacrum and to maintaining a flat back position in standing and a round back position in sitting.

Osgood R B and Bucholz, C. H.: An Apparatus for Obtaining True Comparative Photographic Records of Scoliosis. *J. Am. Orth. Ass.* 1912.

94 J

By Surg Gynec & Obst.

The authors have been impressed with the lack of true comparative photographic records of scoliosis. They realize that any apparatus must be simple, universally applicable and cheap in order to meet the demands of hospital and private work. They have devised a frame consisting of two upright posts firmly fixed in a base board on the front of which are painted feet and inches. On each of these posts slide two horizontal bars extending backwards, the upper and lower pair of which are connected at

the back by a cross bar. On the cross bar connecting the two horizontal bars and on the horizontal bars are adjustable pellets.

The patient stands on the base board in the space enclosed by the horizontal bars and their connecting cross bars. The horizontal bars and pelots are then adjusted so that for a back view the pelots of the lower connecting bar touch the anterior superior spines and the pelots of the upper bar touch the shoulders. The pelots always extend an equal distance from the bars and therefore a view of the patient is obtained in a constant plane. A stereoscopic camera is used with constant lighting and constant distances. For the view in forward bending to show rotation a bar has been devised with a spirit level on top. Two pelots extend downward from this bar the lower one of which is adjustable and slightly longer than the upper. The upper pelot is placed in the vertebra prominens. The lower pelot is placed on the top of the sacrum and the patient bends forward until the bubble of the spirit level is at its midpoint when the photograph is taken.

Thomas, H B: Artificial Ankylosis of Spinal  
Vertebrae *T Am Orth A*: 1943, 20, 4 June.

By Surg Gynec. & Obst

This article is a report of experimental work undertaken to determine the question of growth in length *per se* of the auto bone graft placed in the back to cause fixation of the vertebrae. It is presumed that if the graft does not grow when placed and that since the spinal column does grow as much as nine inches in length in some instances then the tendency would be for the graft to prevent growth in length of the spinal column in that area over which it has caused ankylosis thus producing a deformity of the back. Hattens were used for the experiments and careful observations during life and after death were made. Tentative conclusions led came among other things, that the auto-bone graft does not grow in length *per se* yet actual observations did not show any deformity.

Nash J B Laminectomy for Spinal Injury A  
 tralar M Ger 014 1 114

By Surg Gynec. &amp; Obst.

The author reports two cases of fracture of the spine treated by laminectomy.

The first case was that of a man of 44 who had

fracture of the spine with paraplegia from the lumbar region down the ninth and tenth dorsal spines projecting markedly. An incision was made over the last five dorsal and first lumbar vertebrae the muscle and fascia were dissected away and the spinous processes cut away with bone forceps level with the laminae. The spinal canal was completely exposed between the eighth and eleventh dorsal vertebrae and was found to contain only fibrous strands the cord proper having entirely disappeared. This operation was done eight months after the injury.

The second patient a man of 35 had complete flaccid paralysis of both legs loss of reflexes and a bed sore in the lumbar region following injury to the back. About a week after the injury an incision was made over the tenth dorsal to the third lumbar vertebrae and the spinal canal exposed. The cord was found to have been crushed at the level of the lower edge of the tenth dorsal. After six months the patient was in better condition.

W. A. CLARK.

Collins, J. and Elsberg C.A.: Giant Tumors of the Conus and Cauda Equina. *Am J M Sc* 1914 vol 11 493 By S. R. Gynec & Obst.

Tumors of the cauda equina and of the conus cause symptoms which are considered fairly pathognomonic although early the lesions are often mistaken for some other condition. The authors report three such cases with two recoveries. One was an endothelioma and the other two were endothelial sarcomata.

In two of the cases the operation was carried out in two stages so as to allow the tumor to be extruded from the canal before it was removed.

The important features of the clinical histories of the patients were the following:

1. A history of two or more years duration.
2. Pain in the small of the back sooner or later extending down one and then the other extremity.
3. Stiffness of the back in the lumbar region.
4. Increasing stiffness and weakness of the lower extremities with loss of power of dorsal flexion of the foot.
5. Slight disturbances of the bladder and rectum.
6. The patients were treated for sciatica for long periods.

The important features of the clinical examination were:

1. Rigidity of the lumbar vertebral column.
2. Weakness and stiffness of the lower limbs.
3. Paralysis of the peroneal groups of muscles and sometimes of the tibialis anticus group.
4. Drop-foot on one or both sides.
5. Absence of knee- and ankle jerks.
6. Tenderness of the lower lumbar spines.
7. Irregular and unsymmetrical sensory disturbances.
8. Lumbar puncture was negative or yellow fluid which was of cerebrospinal fluid with drawn.
9. Wassermann test and X-ray negative.

The typical findings at operation consisted of a large reddish brown not vascular tumor within the dura which filled up the entire lower part of the spinal canal surrounded the roots of the cauda equina and extended upward on to the conus with which it was not closely connected. The growth was not intimately connected with the inner surface of the dura and could be easily freed.

When the patient was last examined his complaints were: Pain in the back and right thigh feeling of stiffness obstinate constipation no feeling when his bowels moved.

ELC VE CARY

Taubenschlag D.: Operation with Recovery in a Case of Tumor of the Dorsal Cord (Tumeur de la moelle dorsale guérie et guérie). *Rev Soc med Buenos Aires* 1913 vol 109 By Journal de Chirurgie.

This tumor was the shape of an elongated olive 27 mm long and 15 broad. Its lower pole was free the upper one being fixed to the fourth dorsal vertebra. It developed slowly in a young woman of 22 after a normal delivery the first symptom being a feeling of heaviness in the lower limbs which at the end of three months were almost completely paralyzed. All the trouble was localized in the lower limbs but passive movements could be made readily. There was ankle-clonus on both sides Babinski's sign only on the right, there was abolition of sensation in a band around the thorax corresponding to the innervation of the sixth dorsal root. With a diagnosis of extramedullary tumor operation was performed consisting of laminectomy of the second to the fifth dorsal vertebrae. A hard tumor was found to occupy the left two-thirds of the vertebral canal and the cord was flattened against the right side. It was not adherent to the dura mater but was fixed to the bone by a pedicle which was easily ligated. There was no drainage. Recovery was uneventful and on the tenth day the patient could walk easily. The anesthesia of the thorax also disappeared. Histological examination of the specimen showed it to be a fibrosarcoma.

SALV. MEXCADE

Alurralde M.: Compression of the Dorsolumbar Cord by a Fibrosarcoma. Extirpation (Compression de la moelle dorso-lombaire par un fibrosarcome. Extirpation). *Rev Soc med argent Buenos Aires*, 913 vol 735 By Journal de Chirurgie.

A man of 45 for three or four months had had crises of pain starting at the tenth dorsal vertebra irradiating toward both sides of the abdomen. Then he began to have motor disturbance first in the left and then in the right leg. By the end of the fifth month the paralysis was complete and the pain had stopped. Retention of urine and feces developed then incontinence. All the reflexes were exaggerated there was a knee-clonus and a Babinski's sign on both sides there was formication paraesthesia etc. Meningomyelitis syphilitica and spinal lesion were considered but rejected because of insufficient

evidence. A diagnosis was finally made of pressure on the lumbar or dorsolumbar cord by an intrameningeal tumor.

The patient was operated on by laminectomy of the tenth to the twelfth dorsal vertebrae. The opening had to be extended to include the ninth dorsal and first lumbar vertebrae in order to remove the whole tumor which was extracted easily without

injuring the cord. Suturing was done, no drainage being used. Death ensued on the fifteenth day.

Histological examination of the tumor showed that it was a fibrosarcoma. The author can not explain the flaccid paralysis after operation that succeeded the spastic paralysis, but he is sure that the cord was not sectioned during the operation.

SALVA MISCADÉ.

## SURGERY OF THE NERVOUS SYSTEM

**Jullien: Suture of the Terminal Branches of the Right Brachial Plexus for Complete Paralysis of the Upper Limb (Suture des branches terminales du plexus brachial droit par paralysie complète du membre supérieur).** *Echo Méd. d. Ind.* 1913 xxvii, 603. By Journal de Chirurgie.

A man of 35 had to be put in a straightjacket and the violent and prolonged constriction of the right arm brought about a patch of gangrene which ulcerated and discharged large fragments of gangrenous tissue after that there was profuse hemorrhages to which the patient almost succumbed. The hemorrhages were finally controlled, the wound healed and the patient was discharged in a satisfactory condition.

A month later the patient returned. He had regained strength and ate and slept well but his right arm hung inert, no movement being possible, only the deltoid was spared. The arm was simply a flaccid mass of flesh surrounding the bone, no anatomical details of the muscles could be made out. Insensibility was complete. The skin was the seat of various trophic disturbances.

Details are given of the electrical examination of the various muscles which showed that the flexors of the forearm and hand were most involved, particularly in the region supplied by the ulnar. It was decided to try freeing the compressed nerves or even suturing them if they were destroyed. A large incision which is used for ligating the axillary artery in the axilla was made and the mass was found which had been felt through the skin. It was formed of hard cicatricial tissue surrounding

the axillary vessels and all the nerve-cords of the brachial plexus. The elements were carefully dissected and it was found there were 9 fragments of nerves, some of them united by a slender fiber which the author could not be sure was nerve-tissue. The fragments belonged to the musculocutaneous, median, ulnar, internal cutaneous and radial nerves. The upper end of the internal cutaneous could not be found. The proximal and distal ends were sectioned and brought together with fine silk thread in a fine Reverdin needle. The lower end of the internal cutaneous was included in a little gap in a neighboring nerve that was believed to be the ulnar.

The operation lasted an hour and was considerably interfered with by hemorrhage from numerous abnormally developed veins. The axillary artery was completely obliterated. Operative recovery was perfect. Late results were as follows. In one month there was no appreciable change. Four months later normal motility had made great progress, movements of extension and flexion were possible, the muscles could be made out under the skin which had regained its normal color. Sensation was still dulled. Six months later motion was complete except in the muscles of the hand, the arm was practically as well developed as the left one and sensation had returned completely. Fifteen months after the first operation the hand had become normal and the fingers had regained motion except the thumb. He could move his arm in all directions and it was almost as strong as the other. The case therefore may be called a recovery.

J. DUMOY.

## DISEASES AND SURGERY OF THE SKIN, FASCIA, APPENDAGES

**Oshima T. The Fate of Homoplastic Skin Flaps in Hum. n. Beings (Über das Schicksal des homoplastischen Lappens im Menschen).** *Arch. f. kl. Ch.* 914, 446. By Zentralbl. f. d. ges. Chir. Grenzgeb.

The author gives a review of the results of homoplastic transplantation published in the literature, some of which have been positive and some negative. He reports a case of homoplastic transplantation in a human subject with the results of microscopic examination made at stated intervals. The

result shows that at the end of two weeks the appearance of the flap is practically normal and perfectly coalesced with the surrounding skin, but that it gradually dies and at the end of the forty-seventh day is completely disintegrated.

Experiments were then performed on rabbits, two young rabbits being fastened together only by the pedicle of the skin flap being left as a connection. After seven days the pedicle was cut, immediately after which the flap showed the same picture as the normal skin. On the fortieth day there was a change

fracture of the spine with paraplegia from the lumbar region down the ninth and tenth dorsal spines projecting markedly. An incision was made over the last five dorsal and first lumbar vertebrae the muscle and fascia were dissected away and the spinous processes cut away with bone forceps level with the laminae. The spinal canal was completely exposed between the eighth and eleventh vertebrae and was found to contain only fibrous strands the cord proper having entirely disappeared. This operation was done eight months after the injury.

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J. DUBOIS

## DISEASES AND SURGERY OF THE SKIN FASCIA APPENDAGES

Oshima T.: The Fate of Homoplastic Skin Flaps in Human Beings (Über das Schicksal des homoplastischen Transplantates). *Arch f. kl. Ch.* 1914 cxv 440 By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author gives a review of the results of homoplastic transplantation published in the literature some of which have been positive and some negative and then reports a case of homoplastic transplantation in a human subject with the results of microscopic examinations made at stated intervals. The

result shows that at the end of two weeks the appearance of the flap is practically normal and perfectly coalesced with the surrounding skin, but that it gradually dies and at the end of the forty-seventh day has completely disintegrated.

Experiments were then performed on rabbits two young rabbits being fastened together only the pedicle of the skin flap being left as a connection. After seven days the pedicle was cut immediately after which the flap showed the same picture as the normal skin. On the fourth day there was a change



in the tissue the meshes of the skin tissue were crowded with red blood-cells and there was marked distention of the capillaries. It ended in dry necrosis of the flap.

From his experiments the author concludes that the homoplastic flap does not take and gives three possible reasons for this. The first is the opinion held by Ribbert, Ehrlich, Schöne and others as to

the difficulty of assimilating foreign albumin. The second is the primary toxic effect of the tissue juices of the host on the transplant (Loeb, Schöne). And third, the immunity reaction which may be regarded as a secondary anaphylactic reaction (von Dungern, Ehrlich, and others). Microscopic picture and explanations are added to the work.

VORSCHÜTZ

## MISCELLANEOUS

### CLINICAL ENTITIES—TUMORS, ULCERS, ABSCESES, ETC

Grawitz P. Report on Grawitz's Results in the Study of Cell Formation by the Method of Harrison and Carrel (Abbau und E Neubildung des Harnkloppens) by Verlag Richard Schoetz, Berlin, 1914. By S. Gynec. & Obst.

Twenty five years ago Grawitz of Greifswald, took issue with the existing prevalent dogma and proclaimed that the pus-cells of the human being were derivatives, not of the blood but of tissue-cells which were liberated in consequence of a liquefaction of the tissue. It was possible for him to show that in consequence of the increased accumulation of fluid occurring in inflammation and wound healing elements having the value of cells lying on the smaller bundles of the fibrous connective tissue in a resting or inactive state either incapable of being stained with all usual methods of nuclear staining or at least always decolorized afterwards as it were.

For the various tissues above all for the cornea in particular Grawitz and his pupils have long since demonstrated the origin of the wandering cells from the fixed cells of the tissue. The majority of pathologists have looked askance at the doctrine and disputed its correctness saying that Grawitz would really thereby abandon the law of Virchow *omnis cellula e cellula* and have cells arising from dead intercellular substance. The discovery of Harrison and Burrows that tissue-cells could be encouraged to proliferate without the body stimulus. Grawitz in conjunction with his pupils Schläpke and Uhlig to again take up the question of the origin of the wandering cells in the cornea and heart valves. By the employment of this method it seems possible finally to exclude the possibility of contamination with leucocytes or to maintain that they have wandered out from the blood for both the plasma and hide can be secured scrupulously free from leucocytes.

In the investigation of the cultures of the aortic valves of the cat three different types of tissue disorganization (Gewebestrukturen) were observed.

The stellate cell tissue in which in consequence of the cultivation the mass of the tissue has

P. Grawitz, Wandersellenbildung in der Hornhaut, Deutsch. med. Wochenschr. 41, No. 28.  
P. Grawitz, F. Schläpke, and F. Uhlig, Über Zellbildung, Cornea und Harnklopp. Verlag Hans Adler, Greifswald, 1913.

proliferated, consists of stellate shaped cells. The nuclei of these have increased amitotically and secured the material for the body of their protoplasm and its processes from the elastic fibers.

2. The *Körnerszellen* type is represented by cells, which in contrast to those of type 1 are large, polygonal or swollen and vacuolated and have also divided amitotically and to some extent mitotically. These cells appear to have secured their protoplasm through the contribution of both white and elastic fibers. In the large cell body of these cells lie numerous fat droplets which have probably arisen from the transformed elastic fibers.

3. In the third type the tissue of the valve is replaced by tissue consisting chiefly or almost exclusively of small mononuclear round cells, with clear surrounding area. Many of these mononuclear elements have a clear protoplasmic body which has taken the eosin markedly. Between these cells lie multinucleated giant cells scattered about much as in syphilitic granulation tissue. All of these round cells have arisen from the ground substance through its transformation into protoplasm.

In contrast to the third type a fourth type of tissue may arise in which the small round cells with simple or fragmented nucleus derive their protoplasm from the elastic fibers alone.

These experiments of Grawitz carried out by means of the new culture methods have opened up new outlooks or rather given new points of view with respect to the normal histology and behavior of tissue as well as their pathological transformations. The ground substance is not a dead intercellular matter but a most active one capable of transforming itself into the protoplasm of the new cells.

Grawitz has shown that it is possible to secure by cultivation of corneal and valvular fragments pictures identical with those furnished in inflammation and wound healing but under conditions where the much disputed role of leucocytes can be excluded.

F. LAMBOUS

Balfour D. G. The Care of Surgical Patients. Med. Rev. 9 4 LXIV 378.

By Surg. Gynec. & Obst.

The author discusses the subject under four headings: (1) Care before operation (2) care during operation (3) post-operative treatment and (4) advice to patients.

1 Detailed physical examination and careful recording of the findings is imperative. The actual preparation in the large number of patients requires of them but little deviation from their usual mode of living up to the afternoon of the day before operation. In emergency cases the preliminary treatment is necessarily abbreviated. In special groups of cases the risk of operation is greatly lessened by appropriate preliminary treatment. Among these special types are mentioned exophthalmic goiter, toxic non-exophthalmic goiter, disease of the prostate, severe anemias due to hemorrhage from uterine fibroids, bleeding ulcers of the stomach and duodenum, deeply jaundiced patients, emaciated patients, particularly gastric cases with obstruction of the pylorus, certain cases with acute infections, etc. The use of alkaloids before operation should be limited and probably confined to morphine and atropine.

2 Ether administered through an open mask, by a competent anesthetist, is believed to be the most satisfactory anesthetic for the majority of cases. Ether by the intratracheal method is extremely satisfactory for certain types of cases. A minimum quantity of anesthetic should be used to produce anesthesia which will be just and consistent with the surgeon's work. Careful exploration, a not unduly prolonged operation, maintaining bodily heat as little manipulation as possible, no more retraction of wound than is necessary to expose the parts, accurate hemostasis, and a careful toilet to complete the operation, are all factors in lessening the possibilities of post-operative complications.

3 In the after care, as in the pre-operative care, particular attention should be paid to the special types of cases and to the symptoms and complications as they arise.

4 Patients should be instructed as to caring for themselves and as to what may be expected in the way of symptoms after being dismissed from the hospital. Post-operative treatment of surgical patients as regards judicious living should continue for several months according to the type of the operation.

#### SERA, VACCINES AND FERMENTS

Jobling J W and Petersen W. A Study of the Ferments and Ferment Inhibiting Substances in Tuberculous Caseous Material. *J. Exp. Med.* 9 4 214, 385. By Surg. Gynec. & Ob. t.

The results of this study appear to have a direct bearing on the development of caseation in tuberculosis. Caseation in tuberculosis is a form of coagulation necrosis in which the dead tissues rarely undergo autolysis except as a result of secondary infection. Syphilis is the only infectious disease presenting a similar condition. In other cases of coagulation necrosis the dead tissues are so removed by means of autolysis and phagocytosis.

It appeared therefore to the authors that sub-

stances having the property of preventing autolysis must be present in syphilitic and tuberculous tissues.

After a long and careful series of experiments the authors feel warranted in drawing the following conclusions:

1 Caseous matter obtained from lymph glands which have not become secondarily infected contains substances which inhibit enzyme activity. These substances consist chiefly of soaps of the unsaturated fatty acids.

2 The inhibiting substances are present in relatively smaller amounts when the caseous matter has become secondarily infected. This is probably due to the dilution and washing out of the soaps.

3 Ferments are either entirely absent or present in very small amounts unless the caseous matter has become secondarily infected.

4 Caseous material from the lungs contains smaller amounts of the inhibiting substances. This may be due to the acuteness of the process which does not permit an accumulation of the soaps or to the binding of the soaps with the ferments.

5 Ferments are present in caseous pneumonia. In the whole emulsion the ferments are less active in an alkaline than in an acid reaction, but removal of the soaps shows that those active in an alkaline reaction are also present in considerable amounts.

6 The previous treatment with iodine of caseous matter from both lymph glands and lungs increases the action of the trypsin.

GEORGE E. BRILLY

#### BLOOD

Dejourney. Transfusion of Blood: Its Principles, Indications, and Technique (L. transfusion du sang. Ses principes, ses indications, sa technique). *Arch. d. med. et pharm. mil.* Par. 19 4 141, 41. By Journal de Chirurgie.

The author gives a very clear and methodical résumé of the present knowledge of transfusion. He discusses particularly its application in war surgery and believes that military surgeons should have at their disposal the necessary instruments for practicing transfusion. A deeper knowledge of the blood reactions now enables surgeons to avoid the accidents of hemolysis and agglutination.

It has been found by clinical observation that transfusion has a double action: hemostatic and hematopoietic. Under its influence the number of cells increases, blood pressure and hemoglobin content increase and coagulability rises. He concludes that the results have been particularly satisfactory in acute post-hemorrhagic anemias, especially those following trauma, surgical operation or delivery. Hemophilia of the newborn has also been treated very successfully. In rapidly fatal pernicious anemias and in anemias due to diseases of the blood and blood-forming organs, complete recoveries have been rare, but there have been many cases of

permanent improvement. There have been no results in cancer or infectious conditions, but success has repaid the few attempts at transfusion in certain toxemias such as carbon monoxide intoxication, pellagra, and the pernicious vomiting of pregnancy. It has been tried in typhoid fever but has hardly passed the experimental stage.

The author discusses in detail the technique by the two methods of direct anastomosis by means of suture or special cannulas (Carrel, Cline, Lambert, Guilhot and Dehelly) and indirect anastomosis (Tuffier) by means of paraffined silver tubes. He studies its effects and mode of action and believes that while the indications should not be extended unreasonably, it should hold the important place in surgical practice that is justified by its great clinical value.

FRANK MOORE

### BLOOD AND LYMPH VESSELS

Glaser W. Branches of the Nerves within the Vessel Walls (Über die Nervenverzweigungen innerhalb der Gefäßwände). Deutsche Zeitschrift für Nervenkunde 1914, L, 305.

By Zentralblatt des Chir. Grenzgeb.

Möller and Glaser formerly denied the presence of nerve-centers in the vessel walls and also of networks of nerve-fibers, especially in the deeper layers. In later investigations, by means of a staining method recommended by Kreibich, they succeeded in demonstrating nerve fibers in the large medium and small vessels.

The capillaries were accompanied by and wound about with very fine nerves, the smaller arteries and veins were also surrounded spirally with a rather large nerve and the larger vessels contained besides the nerve-bundles demonstrable in the surrounding connective tissue a network of nerves arranged in two layers in the adventitia and muscularis with some fibers penetrating into the intima. End bulbs could also be demonstrated in the vessel walls.

The nerve network and end bulbs are acted upon by certain drugs which exercise their effect on the size of the vessels through a local peripheral action. Ganglion-cells can be found only in the superficial layers of the adventitia of the arteries of organs; they are lacking in the deeper layers. STEVENS

### ELECTROLOGY

Clunet, J.: Histological Changes Produced by X Rays on Animal Tissues. Destructive Power and Stimulating Power of the X-Rays. J. Radiat. Soc. 9, 4, 9.

By Surg. Gynec. & Obst.

Clunet has confirmed as did Regaud and Blanc the pioneer French histological work upon the destructive action of the X rays carried out by Bergonie and Tribondeau on the testes of rats. A testicle exposed to the X rays filtered so as not to harm the skin shows no cell-changes until twelve to fifteen days have passed when the immature

cells of the spermatogenic line are no longer found for the X rays have caused these cells to mature abnormally fast and only or almost only mature spermatozoa are to be found. A month later not one cell of the spermatogenic line remains.

The rays do not cause indiscriminate destruction of tissue but show a selective action especially for cells that divide most quickly as the cells of a spermatogenic line and this is the basis of the use of X rays in radiotherapy. The X rays modify cell evolution causing the mature cells to evolve more quickly than normal, and the immature cells to evolve before dividing so that this particular line is soon exhausted. The process is exactly the same in the skin. In an experimental acute X ray burn of a rabbit's skin on the seventh day no change was seen in the connective-tissue cells but evolution of all of the malpighian cells into horn cells except for one thin basal layer. Smaller doses over a long time cause atrophy of the epidermis and sclerosis of the dermis. In chronic radiodermatitis the skin is much thinner than normal, the dermis is extremely sclerotic without any papillae and the epidermis is reduced to three or four cell layers.

In a severe radiodermatitis of zonal character the hair was preserved at the periphery near the center the skin was thin and glossy and without hair then followed a zone of ulceration while at the center the tissue was entirely necrotic. Histologically the zone of ulceration showed destruction of the middle part of the corpus mucosum of Malpighi at the center the destruction was complete and the dermis was much thickened. The vessels showed very thick walls and narrow lumen. The endo and perivascularitis.

He described two cases in detail to show the destructive action on carcinomata. In an atypical epithelioma of the skin which had logically resembled rodent ulcer ten days after the first dose the cells became very much enlarged and there were more karyokinetic changes. Three weeks after beginning treatment the cells were difficult to distinguish from one another, had undergone karyokinesis and later these horny parts were invaded and destroyed by connective tissue, blood vessels, and leucocytes. When the patient seemed almost entirely healed, histological examination showed the mass to be almost entirely replaced by connective tissue in which were some giant cells, the last remnants of the epithelial cells and some dark cuboidal epithelial cells that were not killed but were in a sort of lethargic condition which may explain subsequent recurrences in patients apparently cured.

A rodent ulcer given one very large dose at the center, without a filter showed histologically at the end of 21 days, no keratinization at the periphery but keratinization progressively increasing from the periphery toward the center where there remained no trace of epithelial cells — only connective tissue. These same changes were seen in proceeding from the depth to the surface.

The stimulating or hypertrophic action of the X rays can be seen on subjects submitted to very minute doses over long periods of time as a chronic hypertrophic radiodermatitis later often developing into malignant tumors in which can be seen proceeding from the normal skin toward the center in order first, simple hyperplasia then papilloma with enormous horn layer finally monstrous epithelioma cells. Atrophic radiodermatitis and hypertrophic radiodermatitis are nearly always associated together.

Clunet has experimentally produced hypertrophy on rats and by repeated burns a malignant tumor which invaded the abdomen and histologically had the structure of a spindle-cell sarcoma. There were no metastases. The development of experimental X ray cancer is generally admitted in France. In the rat sarcoma develops, not epithelioma however the most common skin tumor in man is epithelioma while in the rat it is sarcoma. Then too in men epithelioma usually results from continued small doses while in the experimental work on the rat the exposures are more concentrated. Clunet has begun experiments on dogs and cats with small doses to be continued over a long period of time to see if he can produce epithelioma.

In the discussion the author said he failed in attempts to transplant his first case of experimental X ray cancer of the rat but in a second case he succeeded in 40 per cent of transplants in getting the tumor to take in very young animals and transplanting it to larger animals and from them to still larger ones.

DAVID C STRAUS

**Stern S** The Present Status of the Non Operative Treatment of Benign and Malignant Growths as Seen at the Clinica Abroad *Med Rec* 94  
1923 615 By Surg Gynec & Obst

From observation of the roentgen technique as practiced at the Freiburg Clinic and its modifications as seen in other places and the radium or mesothorium technique of various operators the author concludes

1 The extreme enthusiasm displayed by the men at the Congress at Halle was entirely too premature and while remarkable results are accomplished by rad active substances in the treatment of cancer the matter is purely in the experimental stage

2 Even in the short time since the Congress the optimism has cooled and men who made positive statements are becoming more guarded

3 Only years of work will solve the complicated question of dosage filters and other technique

4 The treatment with radio-active substances has shown sufficient results to justify the surgeon in discontinuing operations in cases of surface carcinoma and of mucous membranes easily reached in patients who can be kept under long observation. In all other cases, operation followed by raying carried out systematically is still the best method

5 There is practically no difference noticeable in the action of mesothorium and that of radium

DAVID R. BOWEN

**Beebe S P and Van Alstyne E V** Treatment of Transplantable Rat Sarcoma by Fulguration *S & Gy & Obst* 914, xviii, 438  
By Surg Gynec & Obst

The purpose of these experiments was to determine by the De Keating Hart apparatus the effects of fulguration upon normal tissues and upon transplantable sarcoma in rats. Fulguration over the heart and large nerve trunks caused no injurious effects where applied directly to one vagus no serious results followed but when both vagi were exposed to the spark there was a severe reaction followed by death of the animal. The local reaction was an intense edema and infiltration of the tissues. Only very small tumors could be cured by the spark. In some cases the small tumors showed inhibition of growth without cure. If an area of normal skin was fulgurated and a tumor graft placed in this area immediately afterwards it failed to grow but if the local reaction consequent upon the fulguration was allowed to subside a process which required from eight to ten days before the graft was implanted there was no failure to grow indicating that the inhibition in the former case was due to the intensity of the reaction rather than to any permanent nutritional change in the fulgurated area.

Fulguration of a tumor graft before planting caused a serious injury to the tissue only 50 per cent of such grafts showing growth as compared with 100 per cent in the controls. If an incomplete operation was made upon a growing tumor and the remaining portion of the growth fulgurated, cure could be effected provided the section remaining was not more than one millimeter in thickness. The therapeutic effect is probably due to the local reaction consequent upon the application of the spark and not to an obscure nutritional change in the tissue about the tumor.

# GYNECOLOGY

## UTERUS

Weibel W: Lat Recurrences after the Radical Abdominal Operation for Carcinoma of the Uterus (Über Spätrekurrenzen der abdominalen Operation bei Carcinoma uteri) Arch f Gynäk 1914 cil 141

By Zeentrall. f. d. ges. Gynäk. Geb. n. f. a. d. Grenzgeb.

Very few cases of late recurrence of carcinoma of the uterus are known as most of the cases are not followed longer than five years. It is interesting therefore to follow the cases especially those operated on abdominally for a longer time to determine whether there is justification for setting a five year limit for observation. Weibel d. this in 169 cases of carcinoma of the cervix 13 had recurrence of carcinoma after 6 to 8 years and in one case a sarcoma of the foot appeared after five and one half years.

The reappearance of a carcinoma occurred 6 times in the sixth year 5 times in the seventh year and twice in the seventh to the eighth year. Fifty per cent of all recurrences take place in the first year, 25 per cent in the second year 11 3 in the third year and in the following years up to the seventh about 3 4 per cent also from the fourth year the percentage constantly decreases, and after the end of the seventh year recurrences are never seen. To be absolutely certain therefore observation would have to be extended to the seventh year but this is very difficult and for all practical purposes observation for three years is sufficient. The author argues therefore for a reduction of the five year period to three at least for the radical abdominal operation. H. V.

Richter J: The Regeneration of the Mucous Membrane of the Uterus After Curettage (Zur Regeneration von d. Uteruschlaimh. nach Ausräumung) C. 34 R. Arch. 1914 cil 141

By Zeentrall. f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

The author discusses the regeneration of the mucous membrane of the uterus after curettage. He divides his work into two parts. In the first he discusses the results of his microscopic examination of 18 human uteri in the second half of the menstrual cycle and in the second half of the menstrual cycle with curettage and in the second half of the menstrual cycle with curettage. He found that the regeneration of the mucous membrane in dogs is different from that in the human.

The effect of curettage on the mucous membrane varies according to whether the curettage is superficial or deep. In the superficial curettage the greater or lesser remnants of the mucous membrane remain in the uterus for a reconstruction of the lost tissue. The new formation of the glands takes place chiefly through the growing out of the tubes of the glands

that have remained deep down from the cells of which the surface epithelium is restored, by the fifth day the latter has completely covered the curetted surface.

On deep curettage in the fourth week there is a thin layer of young connective tissue rich in blood vessels in which no glands can be demonstrated. This tissue is overgrown with cells which originate from the epithelium of the neighboring parts. There are a few depressions in the covering epithelium which the author thinks may be regarded as the beginning of gland formation. E. S. S.

Theilhaber A: The Causes and Treatment of Idiopathic Hemorrhage and Discharge from the Uterus (Die Ursachen und Behandlung der idiopathischen Uteralblutungen und des A. f. Gynäk. 1914 cil 65)

By Zeentrall. f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

The author demonstrated in 1904 that the thickness of the mucous membrane of the uterus varies before and after menstruation. He found individual variations in the form and number of the glands (1905) and claims priority over Hirschmann and Adler. The increase in the number of glands does not depend on the premenstrual period. "Premenstrual gland" often being found at other periods. Albrecht, Schöckel, Heller and Henk are cited in support of this statement. Hypertrophic glands were found in 52 per cent of all cases, hyperplastic ones in 62 per cent.

Uteri removed by operation are regarded as pathological. He regards as normal only the uteri removed from corpses of newborn infants and old women and mucous membrane removed from normal individuals. No two places in the mucous membrane are alike the only constant thing about the premenstrual mucous membrane being the variation in form the hyperemia and the edema. He gives figures as to hyperplasia and hypertrophy of glands in all the periods of the cycle. He gives no definition of his own conception of the question. In menstruation there is always hyperemia of the uterus. There is hemorrhage in tubal diseases even when the ovary is intact. In many cases the uterus is extremely hyperemic. In many women there is increased hemorrhage from the uterus at the premenstrual period. The uterine erection like the penis or the clitoris but the blood content decreases more slowly. If compares the menstrual bleeding to a sponge the thicker it is the greater the bleeding. The strength of the muscular contractions influences the proportion of the bleeding. Degeneration of the connective tissue and hyperemia are the two factors that induce the hemorrhage. A clear discharge

is caused by hypersecretion a yellow one by gonorrhoea. The glands of the body of the uterus secrete daily.

A short discussion of treatment is given. Curetage is effective many times also corrosives. Styptics also have a good effect as well as systematic scarification of the os—30 per cent formalin is preferred. Röntgen treatment renders the thickened and hyperæmic uterus small and anæmic and causes cessation of the bleeding. **Scurodaz**

**Focke** Digitalis in Hæmorrhage of the Uterus (Digitalis bei Uterusblutungen) *Therap. d. Gynäk.* 9 4 1 68

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Focke has again taken up the digitalis treatment for uterine hæmorrhage. It has the least effect in hæmorrhage due to organic causes in these cases it only supplements local treatment. It has a better effect in pregnancy and threatened abortion and often aids in carrying the child to term. The best results are obtained in cases where there are no anatomical changes in the uterus. The more anæmic the patient is, the prompter the effect of the digitalis in full blooded patients it is necessary to give more frequent doses as the effect begins more slowly and does not last so long.

Focke explains the effect as follows. Physiological menstruation is the effect of venous stasis if this stasis is increased in intensity it is the expression of a local or general disturbance of the circulation which causes severe bleeding. There is seldom real heart disease. Details of the method of treatment are given. Digitalis treatment also seems to give good results in climacteric bleeding. **Brezz**

**Bell W. B.** The Causes of the Non Coagulability of Normal Menstrual Blood and of Pathological Clotting. *J. Pathol. & Bacteriol.* 9 4 xc 46

By Surg. Gynec. & Obst.

The author has carried out a series of experiments in order to determine why menstrual blood does not clot.

His first experiment proved that an equal quantity of menstrual blood will not prevent ordinary blood from clotting. The second experiment as to whether an extract of the endometrium prevents the coagulation of normal blood was negative as clotting occurred likewise an extract of the whole uterus caused clotting. The fourth experiment was to prove whether the endometrium had a selective action on fibrin ferment. This ferment was also negative. The last experiment was to show that menstrual fluid contains nothing that will destroy the fibrin ferment of normal blood. A perfect clot occurred also in this experiment.

The author has printed 2 tables one where the menstrual blood did not clot and one in which it did clot. From these he was unable to draw any definite conclusions. All the experiments performed did not lead up to the etiology of why menstrual blood does not clot. **ELIZABETH CARY**

**Schickele G.** The Relation of Menstruation to General and Organic Diseases (Die Beziehungen der Menstruation zu allgemeinen und organischen Erkrankungen) *Erg. bn. d. inn. Med. u. Kinderheilk.* 9 3 xu 385

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author discusses only the nature of menstruation its relation to general and organic diseases will be published later. His work is based on a critical study of the literature of recent years and extensive experiments of his own. He agrees only partially with Hirschmann and Adler's views as to the regular changes in the uterine mucous membrane. In all cases there is a premenstrual dilatation of the capillaries and vessels and almost always an oedematous saturation of the mucous membrane while the other changes, especially in the glands are not so uniform.

There is a detailed report of the histological findings in the rut of animals the analogy between it and human menstruation must be taken with a grain of salt. The question of the time relation between ovulation and menstruation is still unsettled. Certain changes described in the mucous membrane and corpus luteum vary within wide limits and there are numerous exceptions. He discusses the different theories as to the lack of coagulability of menstrual blood. There is no change in the coagulation time of the blood in the body during menstruation and no uniform effect on the hæmoglobin content and the number of erythrocytes. There is frequently a slight increase in leucocytes and a slight lymphocytosis but this is not uniform. He rejects Mary Jacob's theory of a regular monthly wave-like movement of all the woman's life functions.

A study of the statistical material and careful experiments of his own have shown Schickele that there is no premenstrual rise or intermenstrual fall in the pulse temperature blood pressure muscle strength and metabolism. He describes the experiments as to the effect of extracts and expressed juices of ovary corpus luteum and uterus all of which have a marked vasodilator effect which is especially noticeable in hyperæmia of the genitalia. This is not specific however for it is produced though to a less degree by extracts of other glands. After discussing the clinical course of menstruation and the different theories in regard to it he expresses his own views as follows.

The value of rutting and menstruation lies in the preparation of the mucous membrane of the uterus for pregnancy. Its appearance is dependent on the presence of the ovaries. The growing follicle secretes substances that by osmotic stimulation and influence on the coagulability of the blood circulating in the uterine mucous membrane call forth changes in the uterus the different organs and the whole organism. As soon as a sufficient quantity of these substances has been produced to bring about the maximum of change in the vessels menstruation begins. **REIMANN**

Von Graff E: Treatment of Meno- and Metrorrhagia not Caused by the Climacteric with Röntgen Rays (Die Behandl. der nichtklimacterischen M. n. und Metrorrhagien mit röntgenstrahlen). *Strahlenther.* 9, 1914, 426.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This is a report of 36 completed cases of uterine hemorrhage not caused by the climacteric, in women from 12 years of age up. There was recovery in 81 per cent there being fewer recurrences after intensive treatment than after small doses. The author believes there need be no fear of the impregnation of injured ova and the development of malformed or inferior children because such a thing has never been known to occur in man. All hemorrhages of ovarian origin furnish an indication for röntgen treatment.

WÖSSNER.

Guthrie J. R. and White W. R.: Simple Method of Fixing the Uterus in Procidentia and Prolapsus. *Iowa M. J.* 914, 22, 473.

By Surg. Gynec. & Obst.

The authors claim the following advantages for their method of operation in fixing the uterus in procidentia and prolapse:

(1) Simplicity of technique (2) uniformly good results and (3) it is a bloodless operation.

The disadvantage is that it is necessary to sterilize the patient before the menopause although the menstrual function need not be interfered with. The technique is as follows:

A three or four inch incision is made in the median line or over the right rectus muscle down to the symphysis pubis. The incision is carried down and through the peritoneum. The uterus is grasped brought up into the wound and into ante flexion. If the patient is past the menopause and there is no disease of the adnexa the peritoneum is immediately closed beginning at the upper end. It is sewed to the posterior surface of the uterus where the lower end of the suture line join it. One or two stitches on either side unite the peritoneum and uterus, similar to the Krocher fixation. The round and broad ligaments and tubes are partly extraperitoneal but mostly intraperitoneal. If the incision has been made in the median line the heads of the recti muscles are opened and the muscles sutured together behind the uterus thus making a bed on which it rests. While traction is made on the uterus to draw it up out of the pelvis it is pressed back on the recti muscles and the anterior fascia closed. These sutures also enter the uterine substance. The skin is closed in the usual manner and what looked like a protuberance in the abdominal wall after suture of the muscles, completely disappears.

The entire operation rarely takes more than fifteen minutes. It not only corrects prolapse of the uterus but in most cases cystocele and rectocele are cured as well. Any degree of prolapsus may be treated in this manner. In some cases only the fundus of the uterus can be transplanted while in complete prolapsus almost the whole body may be brought out side of the recti muscles. EDWARD L. CORNELL.

Nyulasy A. J. Looping the Cardinal Ligaments in Uterine Prolapse. *Am. J. Phila.* 29, 4, 15, 637.

By Surg. Gynec. & Obst.

The author states, "The multiplicity of operative procedures for prolapsus uteri indicates to some extent the uncertainty of opinion as to the essential cause of the condition." Some injury has taken place and the uterine supports injured hence repair of the injury and replacing of the uterus is necessary.

The uterine supports are (1) the pelvic diaphragm and (2) the ligaments. He believes the cardinal ligaments, in the broad ligaments are the real supports.

The cardinal ligaments commonly arise by three more or less definite heads from each side of the uterus: the middle head corresponding to the position of the uterine artery, the anterior head being attached to the upper surface of the lateral vaginal fornix and the superior head being attached a little above the median head. The three heads of the cardinal ligaments unite together to form a band about half an inch or more in width which passes outward for over an inch between layers of the broad ligament. The cardinal ligament, which up to this is largely muscular now tends to change its character sending off fibrous bands, fanwise to the wall of the pelvis and other parts—some of these bands it is to be noted, being inverted into the posterolateral wall of the bladder and others passing up over the iliacs. After locating the ureter the cardinal ligament may be dissected from the posterior peritoneal layer of the broad ligament and thus completely isolated. Hooking the ligament up on the finger it is found to be elastic and of considerable strength and obviously quite capable of adequately supporting the uterus in the pelvis."

The technique consists of suprapubic abdominal craniotomy. The bladder is freed from the uterus, the cardinal ligaments exposed and dissected off of the posterior layer of broad ligament and looped up on the anterior wall of the uterus and sutured with silk to the uterus. A loop is made in each round ligament to correct retroversion and the wound in the peritoneum is closed by catgut sutures.

Five cases are reported—all successful. In one the plastic work was done first in four the plastic work was done two weeks later.

The operation should not be lightly undertaken. Its striking advantages are:

1. Practical absence of hemorrhage
2. Excellent immediate anatomical result and almost certain good permanent effect
3. Complete absence of post-operative shock
4. Absence of raw surfaces. C. J. STARK

Grosvenor H. S. Conservative Operative Treatment of Long-Standing Inversion of the Uterus. *J. Am. M. Assn.* 29, 4, 15, 106.

By Surg. Gynec. & Obst.

The author opens the article by briefly outlining the history of the operations recommended for

inversion of the uterus. He reports a case occurring in a young woman 23 years of age in whom the condition had been present for nearly a year. The Spinnell method was followed, tube drainage being employed posteriorly and rubber tissue anteriorly. Following operation the patient had considerable fever which gradually subsided in the course of ten days. There was no peritoneal involvement. Menstruation returned the second month after operation and has been regular since. The patient's general health is good and a recent examination showed the uterus and other pelvic organs normal.

EDWARD L. CORNELL.

Van Teutem L. A.: Treatment of Retroflexed Uterus (Behandlung des Retroflexio uteri). *Vierteljahrsschrift der gynäk. u. geburtsh. Med.* 1914, 11. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A report is given of 1564 patients treated at the Leyden clinic for retroflexion from July 1903 to July 1912. Of these 344 were operated on, 307 by the Alexander Adams operation, 8 by the Doléris, 14 by ventrofixation, 15 by laparotomy, and in 13 total extirpation was performed on account of complications. Of the 1,020 not operated on, 407 were treated orthopedically with pessaries; in 27 the uterus was replaced, 586 were not treated.

The average time of the Alexander Adams operation in 34 cases was 15 minutes. In 32 per cent of the cases 14 days after the operation the uterus was again retroflexed. Later objective examination was not made but subjectively 153 of the patients 70 per cent declared themselves cured, about 15 per cent not cured.

Of 217 patients, 4 had acquired hernia, 99 became pregnant after the operation, 46 had no symptoms during pregnancy, 3 only slight ones, 59 were delivered spontaneously and 24 aborted.

Of the cases in which the Doléris operation was performed one was not cured, one was improved, 3 had recurrence and there was no report from the other 4 cases. After ventrofixation only 20 per cent were cured.

Van Teutem concludes that ventrofixation, vaginal fixation and the Doléris operation should be performed as seldom as possible and that the best results are obtained by the Alexander Adams operation and pessary treatment. In married women the Alexander Adams operation is indicated if the pessary treatment is unsuccessful or if the patients themselves wish it. There was no mortality after the Alexander Adams operations. STRASS.

Elliott H. R.: A Case of Infantile Uterus and Appendixes with Result of Treatment. *J. Am. M. A.* 1914, 10: 1083.

By Surg. Gynec. & Obst.

Elliott reports a case of infantile uterus and appendages with irregular and scanty menstrual flow treated by abdominal massage and the extract of luteum that became pregnant after seven months treatment. Pregnancy proceeded in a perfectly

normal manner and the patient was delivered of a normal full term baby weighing 6 pounds and 2 ounces. Both the mother and baby made an uneventful and perfect recovery.

HARVEY B. MATTHEWS.

Braude I.: Perforation of the Uterus Tearing Off of the Appendix and Multiple Perforations of the Intestine Cured by Operation (Uterusperforation mit Abreissen des Wurmfortsatzes u. d. multiplen perforierenden Darmverletzungen operativ geheilt). *Zentralbl. f. Gynäk.* 1913, xxxvi, 875. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Braude describes a case in which dressing forceps were used in delivering a miscarriage at four months and in which the uterus was perforated, the appendix torn off, three perforations made in the ileum and the left ovary crushed. The patient recovered after suture of the intestine, appendectomy, extirpation of the uterus with drainage and removal of the left ovary. Prognosis is much graver in perforations with dressing forceps than with the curette, finger or other means because there is frequently loss of substance in the intestine followed by infection. A large opening in the uterus especially if made with dressing forceps indicates immediate operation and in infected cases extirpation of the uterus by laparotomy with free drainage through the vagina.

STELER.

Falk J. I.: Innervation of the Uterus and Vagina (Ein Beitrag zur Lehre über die Innervation des Uterus und der Vagina). *D. psychiatr. Moscow* 1914. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author's report is based on a series of experiments performed on rabbits and dogs. The puerperal and gravid uterus reacted most strongly to the virgin uterus least. Stimulation of the peripheral end of the hypogastric, pelvic and internal spermatic caused contractions of the uterus and vagina. Stimulation of the vagus and phrenic also caused contraction which the author believes is due to the fact that these nerves carry sympathetic fibers. The stimulation of the central end of the hypogastric, pelvic, vagus and phrenic also causes contraction. Probably the two first contain sensory fibers for the uterus and vagina. No contractions are caused when the aorta or inferior vena cava are ligated but there are contractions if the nerve net work of the aorta is mechanically stimulated. There is a contraction on severe loss of blood or cessation of respiration. As stimulation of any part of the cerebral cortex the pons, cerebellum, etc. causes contractions and as stimulation of the lumbar cord does not cause any stronger contraction than any other part the author does not believe that there is a center in the lumbar cord for movements of the uterus but assumes that there are several centers, probably one in the medulla as contractions are caused by very slight stimulation of it. The uterus can also contract without any influence from the nervous system as was shown by ex-



periments after section of all its nerves. The author believes the central nervous system has only a regulating effect. Pharmacological experiments showed that strychnine ergotine secacorn hydrazis canadensis adrenalin and suprarenin cause strong tetanic contractions of the uterus and can therefore be used as hysterositics in gynecology. Mammia putrida and extract of ovary cause contractions of a peristaltic character and may be used to produce pains. Contractions of the same kind are caused by alcohol gall extract of placenta and embryo but they cannot be used therapeutically.

Vov Ho st

Heineberg A: Uterine Endoscopy an Aid to Precision in the Diagnosis of Intra Uterine Disease. *J. gynec. & Obst.* 1914 xvii 53.

By Surg. Gynec. &amp; Obst.

As an aid toward greater precision in the diagnosis of intra uterine disease especially the differentiation of carcinoma of the fundus uteri from non malignant conditions Heineberg has devised an uteroscope by means of which a clear view of the entire uterine cavity may be obtained.

The instrument consists of two parts: (1) A straight tube with an irrigating attachment and (2) an electric lighting attachment like the one used in Young's urethroscope by means of which light is projected through the tube to illuminate the uterine cavity. Full dilation of the cervical canal must be obtained before the uteroscope is introduced.

It has served to demonstrate the shaggy endometrium in a case of polypoid endometritis; a piece of fetal envelope; a case of incomplete abortion as well as minor changes in the endometrium in other cases. His conclusions are as follows:

1. There is a well recognized need for methods of greater precision in the diagnosis of intra uterine disease.

2. Greater accuracy in the diagnosis will diminish the resort to unnecessary and destructive operations.

3. Uteroscopy affords information concerning changes in the endometrium which is not obtainable by any other method of investigation.

4. Uteroscopy like other diagnostic procedures has its limitations and definite contraindications. Its use should be restricted to those cases in which it can elicit valuable information without endangering the health or life of the patient.

Guglielberg H: Effect of Internal Secretion on the Activity of the Uterus (Über die Wirkung der inneren Sekrete auf die Tätigkeit des Uterus). *Ztsch. f. Geb. u. Gynäk.* 93 lxxv 3.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Besides the nervous part of the hypophysis other glands with internal secretion have a stimulating effect on the motor function of the uterus especially the thyroid and placenta. The author's experiments confirm the assumption that the placenta possesses

the function of internal secretion as well as having an effect on metabolism. The action of the corpus luteum does not seem to be so uniform. Frequently it has an inhibitory effect. In other cases there was a slight stimulation of the uterus. The author at present is unable to give an explanation of the lack of uniformity in the effect. Probably more extensive research will explain it. In the serum before and during labor there is no increase in demonstrable substances that induce labor pains but in the pregnant uterus substances can be demonstrated that have a stimulating effect on the musculature of the uterus.

Revue

Löhnberg F: Experience with Vaginal Amputation of the Body of the Uterus (L. über Erfahrungen mit der vaginalen Amputation des Uterus). *Arch. f. Gynäk. u. Geburtsh.* 94 vii 30.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

Löhnberg performed vaginal amputation of the body of the uterus on 54 cases up to January 1913 and was able to examine 52 of them later. Twenty five of them were operated on for hemorrhagic diseases of the uterus: 8 for myom, 6 for prolapse, 10 for abortion and sterilization, 8 because of pulmonary tuberculosis; in the second to the fifth month with sacral anesthesia and 1 each for heart disease and bilateral pyelonephritis. The technique in use is described in detail. Twice there were injuries of the bladder once evulsion in Douglas pouch 4 times exudate from the stump twice thrombophlebitis of the lower extremity. There were no deaths and most of the patients were discharged on the twelfth day. Vasomotor symptoms of the menopause were observed in 20 per cent of the cases especially in the older women but they were milder in degree than after castration. There were no psychical disturbances and the findings on gynecological examination were very favorable.

Löhnberg thinks the danger of malignant degeneration of the stump is of great concern and describes 13 cases. He believes with Reck and others that the above method should be preferred to vaginal total extirpation which frequently produces deformity of the vagina. The advantage is the shortness of the operation, less loss of blood and a more uninterrupted recovery. It is also to be preferred to roentgen treatment especially in chronic metritis, if it is necessary for the patient to resume work in a short time.

Suzara

Jung F: Rieck's Vaginal Amputation of the Body of the Uterus (Erfahrungen über die vaginale Amputation nach Rieck). *Gynäk. Archiv.* 1913 xxi 495.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author has performed 25 vaginal amputations of the body of the uterus. 5 of these were for prolapse, 4 cases pregnancy, 1 case metastatic carcinoma.

iosis. The technique was that given in Kronig Doderlein's operative gynecology. There was an eventual recovery in all cases.

In the cases of prolapse he also performed extensive anterior and posterior plastic operations and in a case of cystocele vesicovaginal interposition of the stump. The ages of the patients were from 3 to 55 years; they had had from 4 to 9 deliveries, one being a unipara. All the patients were very much satisfied with the results. Menstruation stopped completely in some cases in others it was slight.

The chief advantage of the procedure is that it is almost completely extraperitoneal and therefore shock is avoided. Though the results of roentgen treatment are satisfactory in such cases the duration of the treatment is so great that operation often becomes necessary on economic grounds or even from the point of view of health if bleeding is persistent. The same is true to a greater degree of mesothorax treatment. MORALZER.

Mayer A.: Dissection of the Ureter and Uterine Artery in the Radical Operation for Carcinoma of the Uterus (Über die Präparation von Ureter und Uterus bei der erweiterten Uteruscanceroperation). *Zisch f. Geburtsh. Gynäk.* 973 lxv 390. By Zentralbl. d. ges. Gynäk. u. Geburtsh. 5 d. Grenzgeb.

In Freund Wertheim's operation the dissection of the ureter is often quite difficult; if for instance it is hard to separate the folds of the broad ligament because of senile atrophy of inflammatory tissue or if hemorrhage from numerous branches of the veins shut off the view of the field. A slight modification of the ordinary operation is recommended.

The ureter is almost always visible at the upper part of the posterior wall of the pelvis and if after ligating the adnexa and the round ligament the uterus is drawn forward and toward the opposite side it becomes visible as far as its entrance into the parametrium. If a long slit is then made over the point of its entrance into the parametrium it at once springs out and then after dissecting the bladder and separating the posterior fold of the ligament to the anterior angle of the incision just made the uterine artery can very easily be isolated, or if this can not be done Wertheim recommends that the entire region of the uterine artery in front of the ureter be seized *in toto* with an instrument or the fingers and cut off. An advantage of this method besides the ease of orientation and avoidance of hemorrhage is the fact that more of the tissue of the parametrium is removed than by any other method. BOVZZI.

Keifer H.: Is There a Myometric Gland in the Human Uterus (Ex ist-il un gland myométriale dans l'utérus humaine)? *A. et B. H. Soc. y d. med. et d. B. M.* 94 lxix, 6. By Journal de Chirurgie.

In 91 Keifer discovered a myometric gland with internal secretion in the pregnant rabbit and since then has been looking for one in other female

mammals. He has found it in the cobra and in the rat where it develops from the middle of pregnancy until just before parturition. He has had difficulty in getting suitable material for study in woman but in 1912-13 he had occasion to perform 7 cesarean sections and in each case he excised a thin layer of uterine tissue along the incision. In the two premature cases it happened that the incision was at the site of the placenta. The material corresponds therefore to that examined in the other animals. The following is a description of the microscopic findings in the specimens removed at term at eight months and at eight and one half months.

1. In the wall of the uterus at the eighth month of pregnancy there was no transformation of the interfascicular connective tissue into epithelioid cells. But the remarkable fact was the extreme hypertrophy followed by a process of cytolysis and karyolysis in the muscle fibers of the walls of the arteries and important sinuses. The details are similar to those observed in the cobra, namely considerable hypertrophy of the cytoplasm and more chromophilic disappearance of the boundaries of the cells, then malformation of the bodies of the cells and nodules by edema and vacuolization finally absorption of these elements when they were located in dense connective tissue or a discharge of the products of cytolysis into the lumen of the vessels of the lymphatic spaces or the neighboring vasa vasorum. Direct division of the nuclei was sometimes observed as well as the formation of very fine grains of reddish brown pigment in the cytoplasm. The connective tissue at certain points of the arterial wall had proliferated abundantly especially in the neighborhood of the muscular zones that were undergoing destruction. At these same points it was infiltrated with numerous lymphocytes. The intervention of the connective tissue in the regeneration of muscle fibers is evident, also that of the lymphocytes in the mechanism of elimination of the remains of the cells. At eight and a half months the fragment of the uterus which the author examined showed clearly that the phenomena of hypertrophy and cytolysis were finished. There were only rare vestiges of this destruction at the time, and they had disappeared completely at term as was found in all the specimens where the cesarean section had been performed at term.

2. Independently of the phenomena just described in the blood vessels of the uterus there was a similar process of destruction in the muscle bundles throughout the whole thickness of the uterus in the placental zone principally along the vessels and especially 1. the immediate neighborhood of the placenta. This shows that in the human uterus as in that of the other animals mentioned notable changes in structure are taking place in the latter part of gestation particularly about the eighth month in the region near the placenta. These changes in the human uterus end in a considerable destruction of smooth muscle parenchyma in the



constituting only two or three per cent of the solid tumors of these organs, the latter comprising but a small percentage of ovarian tissue

Ovarian fibromata occur most often during menstrual life they vary in size from mere granules to huge tumors weighing as much as forty pounds and are the result of an hypertrophy of pre-existing ovarian stroma. The increase in size is slow and usually symmetrical giving a smooth firm ovoid tumor though occasionally they may be nodular

They closely resemble uterine fibroids in the gross, and also on section being tough somewhat elastic milky white in color and presenting the whorl like texture of the former on section. They are subject to the same degenerations and transformations as are the uterine fibroids

Encapsulation is almost invariably present and this is a very important sign in differentiating from sarcomata with which they are most apt to be confused. Here the age of onset and rapidity of growth are also important being earlier and more rapid with sarcoma

The case reported showed microscopically interlacing bundles of hypertrophied connective tissue fibers more or less compact the nuclei of which were large rounded or oval, stained uniformly and evenly and showed no evidence of direct or indirect division

Michalowaki I O Study of Call Exner's Bodies  
(Ein Beitrag zur Lehre von den Call Exner'schen Körpern) *Dissertation* Moskau 04  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. 3 d Grenzgeb.

The author performed his experiments on rabbits. In young rabbits no Call Exner bodies could be demonstrated. They first appear in animals 11 weeks old and reach their highest development at the period of sexual maturity. The further development of the bodies was followed by removing an ovary and examining it microscopically and after the lapse of a certain time removing the other ovary and examining it microscopically. The Exner's bodies were found to show a cyclical development the maximum being attained at the time of menstruation while the bodies disappeared entirely during pregnancy. The development of the bodies requires a month and a half in rabbits. He also found that they are more markedly developed during the summer months than during the winter.

As marked development of the bodies and hyperemia of the pelvic organs were always observed in conjunction the author tried to produce artificial hyperemia. Ovaries of other rabbits were transplanted to the abdominal cavity and in further experiments extract of ovary injected. Though the results were not absolutely uniform yet they showed that these manipulations produced an increase in size and number of the Exner's bodies. The author assumes hypothetically that the Exner's bodies produce a hormone that causes hyperemia of the pelvic organs and prepares the mucous membrane of the uterus for the implantation of the ovum.

If impregnation takes place the embryo produces hormones which affect the cells of the corpora lutea in such a way that the hyperemia of the uterus is preserved. He proposes to give up the meaningless name Exner's bodies and substitute that of Exner's vesicular glands. Von Holz

Palmer C D Prolapse of the Ovary Its Rational Management *Am J Obst Gynec* 194 xviii 561  
By Surg. Gynec. & Obst.

In discussing prolapse of the ovary Palmer states that a prolapse is a morbid entity only when alterations in the position are persistent and unalterable by natural efforts and when they become the sources of pelvic discomfort and constitutional disturbance. He discusses the etiology and symptomatology and suggests the following treatment:

(1) Obviate constipation by diet and laxative waters. (2) Readjust the clothing so that there is no compression about the waist. (3) Knee-chest position night and morning. (4) Constitutional treatment such as tonics, etc. (5) Mechanical supports for the ovary as tampons. (6) Surgical treatment when resorted to should always be by the abdominal route in this way the condition of the ovary can be ascertained and if necessary oophorectomy may be done. (7) Some cases also do well with faradic and galvanic electrical treatments.

LEONIE CARY

Kriwsky L. Surgical Treatment of Inflammatory Diseases of the Adnexa (Z chirurgischen Behandlung der entzündlichen Adnexitiden). *Vach Gyn.* 914 vi 15  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. 3 d Grenzgeb.

In the gynecological section of the Municipal Hospital of St. Petersburg from 1910 to 1913 inclusive about 24,000 patients were treated among whom 3,683 or 15.2 per cent had inflammatory diseases of the adnexa. The greater part of these about 200 were treated by incision of the posterior fornix or in some cases of the anterior fornix. Laparotomy was performed 191 times for the removal of purulent adnexa 17 times for acute diffuse peritonitis originating in a purulent inflammation of the adnexa. Operation was performed 51 times for chronic inflammation of the adnexa 48 times by laparotomy and 3 times per vaginam. Emphasis was laid on preserving the organs of the patient as far as possible the uterus was removed in only a few cases. The prognosis in chronic non-purulent cases was good. In the severest cases that is those with acute diffuse peritonitis the number of deaths was comparatively low—35 per cent. A. Wzarn.

#### EXTERNAL GENITALIA

Eden, T. W. A Case of Superior Rectovaginal Fistula. *J. Obst. & Gynec. Br. Emp.* 194 xxv 175  
By Surg. Gynec. & Obst.

The author reports a case of high rectovaginal fistula that was operated upon by the abdominal



Fig 1

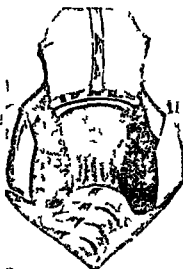


Fig 2



Fig 3

Fig 1 (Eden) The fistula exposed per vaginam, showing the rectal bougie in position.

(Note — The anterior cervical lip is disproportionately large and its level too low in the drawing.)

Fig 2 (Eden) The abdominal operation. The solution of the terus and the upper part of the vagina has been completed and the floor of Douglas pouch has been opened up. The adhesions immediately above the

fistula have been exposed by pulling the terus upwards. The anterior peritoneal flap has been stitched to the skin concealing the bladder.

Fig 3 (Eden) The dissection has been carried farther and the fistula divided through its lower border and the rectum separated from the vagina for an inch further down. The lateral margins of the rectal opening are held by dissecting forceps.

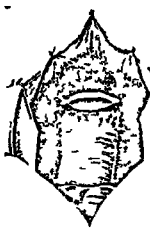


Fig 4



Fig 5



Fig 6

Fig 4 (Eden) The rectal opening has been closed by series of sutures set at right angles to the line of the gut. The uterus has been amputated and ligatures have been placed at the sides of the vagina.

Fig 5 (Eden) A flap has been prepared from the poste-

rior sigmoid wall and attached to the rectum so as to cover the site of the fistula.

Fig 6 (Eden) Pantonization of the pelvic floor has been completed by stitching the anterior peritoneal flap to the rectum.

route after a preliminary colostomy. Four weeks after the closure of the fistula the continuity of the pelvic colon was restored the patient making a satisfactory though not uneventful recovery.

The author divides rectovaginal fistulae into three groups according to their situation: (1) Rectovulval fistulae; (2) inferior rectovaginal fistulae involving the lower half of the vagina; (3) superior rectovaginal fistulae involving the upper half of the vagina.

With regard to causation it may be stated briefly that rectovaginal fistulae may be due (1) to direct injury to the rectum during a vaginal operation and it appears that in vaginal coliotomy for acute suppurative condition the risk of injury to the rectum is most to be feared—at any rate most of the recorded post-operative cases have followed this procedure; (2) to direct laceration of the rectovaginal septum in labor; (3) to rupture of a pelvic abscess into both rectum and vagina; (4) to ulceration from syphilitic or tuberculous disease of the rectum or from a neglected pessary or other foreign body in the vagina.

The advantages of the various routes for operation are discussed in detail with the following conclusions:

1. For those belonging to the group of rectovulval fistulae the method of direct suture is usually sufficient posterior colporrhaphy may be done at the same time.

2. For inferior rectovaginal fistulae a perineal operation is the most useful and may be supplemented by complete or partial excision of the lower segment of the bowel if necessary.

3. For superior rectovaginal fistulae the abdominal route is probably the easiest and the best and should prove not to be attended by disproportionate risks. In difficult cases: e. when the fistula is large and the parts are immobilized a preliminary colostomy should be performed.

CAREY CURTIS KISCOV

### MISCELLANEOUS

Walker F. E. The Induced Climacteric. *J. Lancet* 1914 xxxix 8. By Surg. Gynec. & Obst.

During the past seven years a total of 106 operations were performed for the induction of artificial climacteric. Following a precise pre-operative and post-operative investigation of these patients the author is convinced that a masculine type in any form does not develop from the removal of any of the female sexual organs nor does any abnormal condition supervene other than would obtain in a perfectly natural menopause.

That a certain number of women so operated on will gain flesh is true but the increased weight results from the removal of a diseased condition which prevented perfect nutrition. The operation simply restores the physiological equilibrium in the same manner as the removal of a diseased appendix, an enlarged and troublesome thyroid, or a dead kidney. Even where nutrition has not been interfered with by reason of disease in these organs, the tendency to an increased weight may be a family

characteristic or due to the age of the patient. The author thinks that ablation of the ovaries, tubes or uterus does not tend to obesity other than as a healthy or physiological result neither in his experience nor observation has it been noted. There is nothing to indicate an inclination to develop the masculine either in vocal changes, gestures, locomotion, language, sexuality or general appearance.

That the removal of any or all of the sexually diseased organs was a factor in producing insanity was not evident. Unfortunately hereditary insanity developed in a few cases reported in the literature but the operation upon and removal of a diseased organ was not and could not be responsible. Any number of women with acquired insanity have been entirely restored to health. In his series one woman who had been insane for years and another insane for five years were completely restored to a normal mental condition.

Prolongation of climacteric symptoms following the surgical menopause was never observed but exacerbation of such symptoms was quite evident in the majority of patients especially in the highly nervous type and those between the ages of 30 and 38. After entering the climacteric age the operation may cause an apparent change to an appreciable extent. The exacerbation of symptoms was most pronounced in those between 30 and 40 years of age but these symptoms ended quickly.

It was questionable if there was any amelioration of symptoms when a whole or part of an ovary was left and the uterus removed. It softened the severity but on the other hand no appreciable gain in the long run was noted. In those patients in whom a transplantation of ovarian tissue was made a recovery analogous to conservation of tissue *in situ* was noted. It was not encouraging to leave ovarian tissue where severe infection necessitated the removal of the uterus and one tube and ovary or the uterus alone. Five per cent of the patients formerly operated on with the idea of leaving some of the tissue which looked healthy were reoperated on within a year. During the past four years it has been the author's practice to treat severe infection in the most radical manner and the result has been gratifying in every instance.

The author has reached the following conclusions after considering 84 cases in which the pre-surgical and post-surgical history were secured:

1. Thirty-five per cent gradually lost their sexual desire. After operation sexual desire returned in 34 per cent with improvement in all.

Twenty per cent were possessed of abnormal sexual desire and about 5 per cent of these were perverts—some mild a few severe. Operation relieved about one half but in three cases of severe perversion no improvement was noted.

3. In 55 per cent therefore there was a deviation from normal in the sexual appetite due entirely to diseased conditions and all were benefited in this respect except the advanced perverts.

4 The removal of the uterus, tubes and ovaries increased the sexual appetite almost immediately but this gradually diminished year by year. With the removal of the uterus only the appetite assumed a more normal and constant aspect while the removal of the ovaries seemed to lessen it during the first few months followed by a gradual return to normal. Depressing mental effects from ablation of the ovaries was much more noticeable than when the uterus alone was removed. When the uterus and ovaries were removed there was much less depression than when the ovaries alone were taken out. The depression was accounted for as being due to the mental or physical impression upon the sensitive female organization as most women felt that they were sacrificing the greatest blessing of wifehood and motherhood. It was noticeable in women who did not desire a family that complete and radical operation never depressed them that the intercurrent symptoms of induced menopause were rather insignificant that a hopeful convalescence ensued and that mental and physical vigor was a constant and characteristic result.

EDWARD L. COE, M.D.

Von Graff E.: The Thyroid and the Genital Organs (Schilddrüse und Genitale) *Arch f Gynäk* 94 4 cu, 1900

By Zentralbl f d ges Gynäk u Geburtsh. s d Grenzgeb

Freund found coincidence of pregnancy and goiter in 90 per cent of cases. Von Graff examined 654 women during the second half of pregnancy to test the frequency of this coincidence. He found it in 44 per cent of the cases among the women of Vienna and in 40 per cent in other women. An increase during pregnancy was found in only 7 per cent. In comparison with 500 non pregnant women there was an increase of only 9 per cent in the positive cases in pregnancy. 15 per cent in women of Vienna. The regular increase in the size of the thyroid during labor that Freund found constantly. Von Graff found in only 35 per cent of the cases. The latter could not find an increase at the end of the first week in connection with lactation rather the swelling of the thyroid decreased continuously during the puerperium though sometimes incompletely so that a permanent enlargement remained.

After a detailed discussion of some cases of pregnancy complicated by pathological goiters the author takes up the question of the effect of goiter on metabolism. Among 490 pregnant women he found spontaneous glycosuria in 13.8 per cent among the women with goiter in 15.8 per cent and those without goiter in only 11.2 per cent. The difference was more pronounced in alimentary glycosuria 58 per cent in patient with goiter 24 per cent in those without it. Albuminuria was somewhat more frequent in women without goiter 21.1 per cent as compared with 16.6 per cent. Giving ovarian extract had no effect on the size of the goiter. Freund's assertion that goiter frequently appeared during the climacteric was rejected as

well as his claim that goiter often coexists with myoma.

HASEK

Velt J.: Eugenics and Gynecology (Eugenik und Gynäkologie) *Deutsche med Wochenschr* 1914 21 410

By Zentralbl f d ges Gynäk u Geburtsh. s d Grenzgeb

Velt reports a caesarean section in a 36-year-old chondrodystrophic dwarf with the delivery of a normal well formed child and on the same day the delivery of an anencephalus by a normal 15-year-old girl. On the basis of these cases he opposes the demand of Hirsch that the obstetrician should take eugenics into consideration more than has heretofore been done and that patients with hereditary taint should be sterilized. He then discusses the theoretical principles of eugenics in relation to psychosis, epilepsy, imbecility, chronic alcoholism, infectious diseases especially tuberculosis and syphilis, marriage of relatives etc. and says that it is well known that injury to the descendants may occur from disease and inherited predisposition from the parents but that this does not necessarily occur. He doubts whether it is justifiable to draw such practical conclusions from this teaching as for example the forbidding of marriage and thinks it would be better to inculcate eugenic principles in the knowledge, customs and moral conceptions of the people than to forbid marriage. Sterilization and artificial abortion from eugenic indications, he believes are measures that at present cannot be shown to be necessary on scientific grounds. So long as the study of heredity has not shown when inherited taint may lead to injury of the descendants he thinks no such serious measures should be taken.

KLEIN

Schmitz, H. Masel Y. Raying in Gynecology *Surg Gynec & Obst* 914 XVI 3 6

By Surg Gynec. & Obst.

The author reviews the biological foundation of gynecological radiotherapy minutely describes the technique and its results on the treatment cites the methods used by Albers-Schönberg, Gauss and himself and finally dwells on the different gynecological diseases which may be subjected to raying and gives the indications for the treatment.

His technique is as follows: Local distance 0-22 cm. 3mm aluminum filter current of 4 to 5 ma. water cooled tubes of 9 to 12 Wehnelt diameter fields each of 5 sq cm. Each field is rayed twice during a series of six daily sittings and an amount of 8 to 10X is applied to each field. The total amount during one series is from 20 to 240X. An intermission of three weeks is taken between series. The skin is compressed by tube and the intestines are displaced by a slight elevation of the pelvis.

Metropathic hemorrhagic chronic metritis, myometritis, pruritus vulvae, adnexal inflammation and dysmenorrhea have been successfully treated. Malignant disease of the pelvic organs was never benefited by massive raying.

Hölder H: Irradiation in Gynecology (Über Strahl-  
enbehandlung in der Gynäkologie) *Med. u. chir. Wochenschr.* 94, 1917, 5  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The Tubingen Gynecological Clinic in general follows Gauss technique but avoids the extraordinarily high doses. Submucous myomata, those with a foetid discharge or necrosis and those with symptoms of incarceration are excluded from treatment. Among 53 cases of myoma and climacteric hemorrhage the uterus had to be removed once because the hemorrhage did not stop. On operation a submucous necrotic myoma as large as a fist was found. Good results were also obtained in some cases of genital tuberculosis. With roentgen treatment alone unsatisfactory results were obtained in the 26 cases of cancer of the cervix which were almost all in an advanced stage. Nor were the results changed much when 22 mg of radium bromide were used. *Goldschmidt*

Klein H V: Value of Hydrotherapy in Gynecology (Die Bedeutung der Hydrotherapie für den Gynäkologen) *Ztsch. f. phys. u. diät. Therap.* 94, 1917, 17  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

A summary is given of the results obtained in the hydrotherapeutic section of Wertheim's clinic since its establishment a year and a half ago. Hydrotherapy is used as a prophylactic in healthy women as a treatment for sick ones and hygienically for pregnant and puerperal women. Hydrotherapeutic treatments which have been begun can be continued during menstruation without any danger. During the first half of normal pregnancy Klein recommends tub baths three to four times a week for ten or fifteen minutes at a temperature of 32 to 34°. They can be continued during the second half but toward the end of pregnancy he prefers shower baths. Normally irrigation of the vagina is superfluous only if there is a yellow discharge from the vagina it must be disinfected with bichloride or lysol. He has had no experience with Zwaefel's lactic acid irrigations which should not contain 5 per cent but only 0.5 per cent lactic acid. Hydrotherapy should not be employed in eclampsia; the results in pernicious vomiting were negative. In febrile diseases during the puerperium warm packs and cool baths are of value in reducing the high temperature. In parametritic exudates and chronic inflammatory tumors of the adnexa mud baths are recommended. In pruritus vulvae and beginning kraurosis warm douches of the pelvis and carbonic acid baths.

*Hamann*

Schaeffer R: The Frequency Causes and Treatment of Sterility in Women (Über II Urfachen, Ursachen und Behandlung der Sterilität der Frauen. Ein statistischer Beitrag) *Ztsch. f. Bekämpfung d. Geschlechtskr.* 14, 93, 1917, 39  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Among 5196 married women of the laboring class in Berlin who visited the polyclinic 500 or 96

per cent were primarily sterile while 505 or 11.5 per cent were childless. The determination of the potency of the husbands of women with gynecological diseases is difficult as many of the men refuse the examination.

Reports as to the frequency of gonorrhoea in sterile women vary widely. Some authors demand demonstration of gonococci for diagnosis while others consider the clinical diagnosis sufficient. In many cases of chronic gonorrhoea the gonococci cannot be demonstrated and the presence of inflammatory diseases of the adnexa in sterile women may be regarded as practically a proof of gonorrhoea. The pathological causes given as causes for sterility can generally be regarded only as probable causes or as factors that have been found by experience to render conception difficult.

Among the 451 women in Schaeffer's clinic with primary sterility 304 or 67.3 per cent suffered from gonorrhoea or from inflammatory diseases of the internal generative organs that were to be attributed almost exclusively to gonorrhoea. Acquired causes of sterility are far in excess of congenital ones. Among 378 cases of women secondarily sterile 271 or 71 per cent suffered from gonorrhoea or inflammatory diseases of the genital organs.

The best results were obtained from treatment in uncomplicated stenosis of the cervix, endometritis, dysmenorrhoea, and retroflexion but even in gonorrhoea, treatment if begun early and carried out carefully was successful in a part of the cases. Therefore, early diagnosis of the cause of sterility is essential in order to begin treatment early.

*Korlex*

Kakuschkin N M: Exploratory Puncture in Exudates and Different Collections of Fluid in the Pelvis (Beobachtungen über die Probepunktion bei Exsudaten und verschied. ne Ansammlungen im Becken) *Ztsch. f. Geburtsh. u. Gynäk.* 93, 1917, 1783  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author has used exploratory puncture for diagnostic and therapeutic purposes in different inflammatory processes of the adnexa and pelvic cellular tissue except in violent acute cases such as retrouterine hematocoele and comes to the following conclusions: (1) The puncture in many cases causes a fall in temperature and hastens the absorption of the products of inflammation. (2) The action of the puncture in lowering temperature and hastening absorption is explained partly by changes in the circulation in the area of the puncture on account of the hyperæmia caused by the puncture and partly by the removal of some of the contents of the inflamed focus. (3) He uses puncture systematically in the treatment of old pelvic exudates. (4) In fresh cases with a highly virulent exudate the temperature may rise after the puncture because the microbes from the focus of infection are transmitted to the general circulation through the trauma caused by the puncture. *Ginsburg*



**Gerdes, I U** A Case of External Female Pseudohermaphroditism (Ein Fall von Pseudohermaphroditismus feminin) *Hsp Tid Kjøbenh* 9 3 vi 1901  
By Zentraltid f d ges Chir u i Grenzgeb.

A 43 year-old unmarried woman had nephrectomy performed for kidney tuberculosis on the right side. She died the day after the operation of embolus of the pulmonary artery. The post mortem showed the following conditions: Thorax of masculine form; mammary glands not developed; pubic hair of masculine type; clitoris 5 cm. long with a marked prepuce; corona and retro glandular sulcus on the lower side of the clitoris there was a furrow which continued into a canal into which both the vagina and the prostatic part of the urethra emptied; the prostate was well developed; the vagina broad and roomy and 6 cm long; the uterus was also well developed 6 cm long with a smooth mucous membrane and the ovaries were oval and of the normal size. There were no corpora lutea, no cysts, and no depressions showing ruptured follicles on the surface. The adrenals were very large, the right one being 8 cm broad, 5 cm long and 1/2 cm thick. Little was known of the mode of life and character of the patient, but as a child she had generally played with boys. She took no interest in feminine activities, and had never had an intimate relation with either a man or a woman. In the hospital where she was placed with other women patients she showed a great interest in them so that it would seem that her feelings were homosexual.

S. J. GAMMELROFF

**Jachontoff, A.** Transverse Incision of the Abdominal Fascia in Gynecological Laparotomies (Zur Frage des Transversen Schnittes der Bauchwand bei gynäkologischen Laparotomien) *Zts f Geburtsh Gynäk* 1913 LXVII 1673  
By Zentraltid f d ges Gynäk u Geburtsh u d Grenzgeb.

The author reports 160 gynecological operations with Pfannenstiel's transverse incision of the fascia. The skin incision is arched and 9 cm long. There is a transverse incision of the aponeurosis and the upper edge is dissected with a blunt instrument. At the linea alba where the edges of the recti touch the aponeurosis is dissected with a knife. Large tumors may be removed in this way; solid ones piecemeal; cysts by being punctured. The lower edge of the wound allows good view of the true pelvis which is generally necessary in gynecological operations. Hematomata are avoided by careful ligation. The coils of intestine are under the diaphragm, covered with omentum; the patient lies in the Trendelenburg position. The transverse incision prevents post-operative hernias and

the cosmetic result is more satisfactory than in the longitudinal incision. The author believes in extending the indications for the transverse incision. *Grosscurat*

**Kelly H A and Dunn W M** Urinary Incontinence in Women without Manifest Injury to the Bladder: A Report of Cases. *Surg Gynec & Obst* 1914 VIII, 444  
By Surg. Gynec. & Obst.

The authors report the results of a series of 20 cases of urinary incontinence operated upon in the Gynecological Clinic of the Johns Hopkins Hospital and Kelly's Sanatorium. Various methods of treatment for urinary incontinence both palliative and operative are reviewed. For thirteen years Kelly has adopted an operative procedure which is as follows:

- 1 With a small Pezzer catheter in the bladder as a guide a median incision about 3.5 or 3 cm long is made in the anterior vaginal wall, the neck of the bladder falling at about the center of the incision.
- 2 The bladder and urethra are detached from the vagina by blunt dissection so that the finger is able to grasp one-half or two-thirds of the neck of the bladder including the contiguous urethra.
- 3 The tissues at the vesical neck are brought together by two or three transverse mattress sutures of fine linen or silk. The mushroom catheter is then removed, the head of the catheter escaping with a jump as it clears the reconstructed sphincter area.
- 4 The redundant vaginal walls are resected so that the remaining tissues can be snugly approximated from side to side, thus supporting the vesical area operated upon and avoiding dead space.

Fowler's position is assumed immediately following operation, but catheterization is not done unless imperative. The patient is up on the fourth day, provided it has not been necessary to combine some other procedure with the one described. Eighty per cent of the cases operated upon proved successful.

The following conclusions are noted:

- 1 There is a type of urinary incontinence in women with no manifest injury to the bladder which is due to an impairment of function of the sphincter muscle at the internal orifice of the urethra. It is most common among multiparae in the fourth decade.
  - 2 The operation as performed by Kelly is the most satisfactory thus far suggested for this type of incontinence. Entire control is gained in a large percentage of cases by means of a mechanical restoration of the sphincter area at the vesical neck.
- The operation may be done under local or general anesthesia. The post-operative treatment is simple.

# OBSTETRICS

## PREGNANCY AND ITS COMPLICATIONS

Eisenreich O: Biological Study of Normal Pregnancy and Eclampsia with Special Consideration of Anaphylaxis (Biologische Studien über normale Schwangerschaft und Eklampsie mit besonderer Berücksichtigung der Anaphylaxie) *S mm l kl Verh 9 4 No 694 669*

By Zentralbl f d ges Gynaek u Geburtsh d Grenzgeb

The author tried experimentally to solve the question of whether eclampsia is to be regarded as an anaphylactic phenomenon. He sketches the historical development of the theory of eclampsia, the last stage in which he conceives eclampsia to be due to anaphylactic shock, discusses the principles of anaphylaxis and the theoretical possibility of the appearance of anaphylaxis in pregnancy, that is an anaphylactic reaction of the maternal organism to fetal albumen.

The attempts to prove the anaphylactic nature of eclampsia by the methods heretofore in use have not given decisive results. The author therefore tried to decide the question by the passive transmission of hypersensitiveness. He sensitized guinea pigs by the intraperitoneal injection of maternal serum after 24 to 36 hours he gave an intravenous re-injection with fetal serum. Of fifty guinea pigs treated in this way with maternal and fetal serum 41 showed no symptoms, 9 showed non-characteristic pseudoanaphylactic symptoms. Sixteen guinea pigs that had been treated with the serum of eclamptic mothers and their children showed the same symptoms. Not a single animal died of shock. These experiments show that eclampsia is not an anaphylactic phenomenon. Also experiments made by the author in regard to the condition of complements in normal and eclamptic pregnant women do not support the assumption that there are anaphylactic relations between mother and child. But the complement experiments show clearly that in eclamptic patients biological processes are taking place that seldom or never occur in the normal pregnant woman. The complement content of the serum of a normal woman is practically constant while that of the eclamptic woman shows great variations which however are by no means uniform. Experiment with the complement fixation reaction showed that the re was no antibody reaction between the mother and child. The details of the experiments must be read in the original. *L u t*

Peters Duration of Pregnancy (Schwangerschaftsdauer) *Zentr bl f G 3 3k 9 4 vnu, 329*  
By Ze tralbl f d ges Gynaek Geburtsh d Grenzgeb

It is known now that ovulation generally takes place 18 to 19 days after the beginning of the last

menstruation. We can therefore determine with greater certainty the beginning of pregnancy. In cases where coitus has taken place regularly rupture of the follicle and beginning of pregnancy are almost synchronous. The date of birth may be delayed 5 to 7 days by the possibility that the ovum may have been impregnated during its migration. The cases where there has been only a single coitus should be examined for this point. The duration of pregnancy should be reckoned from many thousands of cases with normal mature fetuses and a definite knowledge of the date of beginning of the last menstrual period. *L Hirsch*

Findley P: Ectopic Pregnancy *Med Foll 1914 xiv 15*  
By Surg Gynec & Obst

Two phases of the subject of ectopic pregnancy are of special interest, i.e. (1) diagnosis before rupture of the gestation sac and (2) immediate versus deferred operation for intra-abdominal hemorrhage.

Findley believes that early diagnosis is very seldom positively made. Ectopic pregnancy should always be considered in women of the child-bearing age with pelvic disorders, especially in those with a history of tubal infection some years back. Also in women whose periods are from four to twenty days overdue followed by a dark clotted flow, the condition should be considered.

The initial hemorrhage which follows rupture of the tube is not as a rule great but the attending shock may be profound. Every means should be used to restore this patient to a better condition but should secondary hemorrhage follow an operation should immediately be performed with all possible speed.

Before rupture the only safe procedure is removal of the pregnant tube. Late after rupture only vaginal drainage is as a rule necessary.

*EDGEE CARY*

Fries Unusual Forms of Ectopic Pregnancy (Über seltener Ektopischer Schwangerschaft) *Dtschch med W 3 3k 9 4 xl 20*

By Ze tralbl f d ges Gynaek Geburtsh d Grenzgeb

The author reports two cases of his own of ovarian and peritoneal pregnancy. In one case the left ovary transformed to a blood cyst lay in Douglas pouch. Villi could be demonstrated in the microscopically. In the second case the ovum was located at the seat of the appendix which had previously been removed. It was a blood nodule as large as a walnut and was covered in an apron-like fashion by omentum. The cavity of the ovum with the embryo and villi could be demonstrated microscopically. The author regards both cases as genuine. *ROGGE*

Beckmann, W G: Two Cases of Extra Uterine Pregnancy Persisting after Rupture of the Pregnant Tube and the Pregnant Uterus (Zwei Fälle von progressierender Ekt. uterinigravidität nach Ruptur der schwangeren Tube und des schwangeren Uterus) *Ztschr f Geburtsh Gynäk* 19 3 xxviii, 1890  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The first case was a 35 year-old VI-para whose last delivery was 7 years previous. For four months she had had increasing pain in the abdomen. In the left lower quadrant was an irregular tumor. The uterus displaced to the right could not be palpated. No fetal movements or fetal heart sound could be discerned. Laparotomy was performed and old blood found in the abdominal cavity. The fetus was found in the left side of the abdomen with the membranes adherent to the intestine and omentum. The placenta was located on the sigmoid flexure and omentum. In loosening the placenta from the intestine the serous membrane was injured. Death occurred on the fourth day from peritonitis. The fetus was 33 cm. long, the head flattened there was torticollis and talipes calcaneovalgus.

The second case was a 36-year-old VI para whose last delivery was three years before. The abdomen was the size of a full term pregnancy, the uterus was enlarged and there were fetal movements and heart sounds. The clinical diagnosis was either intra-uterine or extra-uterine pregnancy with adhesions to the fundus of the uterus. Laparotomy was performed and the omentum was found adherent to the abdominal wall. Back of the omentum the living fetus was found in the left lumbar region with the legs in the right hypogastrium. The placenta was very large situated on the fundus of the uterus and adherent to it were the omentum and the intestines. The membranes were open on the upper side the legs lay between the coils of intestine. Because of the adhesions only a part of the placenta could be resected the other part was sutured to the parietal peritoneum. The abdominal wound was drained.

The child was 48 cm long and weighed 2 550 grams. On the right upper arm there was a scar showing a healed fistula. There was contracture of both elbow joints. The patient died on the sixteenth day of peritonitis. There was a rupture 13 cm long in the left side of the uterus. The cavity of the uterus contained old blood. The opening indicated a rupture of the uterus in the early months of pregnancy. The further development of the fetus took place in the abdominal cavity. This case shows the danger of such persisting extra-uterine pregnancies the adhesions of the placenta to the intestine cause injury of the latter and leaving the placenta often causes peritonitis and death. Gräber

Gräber: Primary Pregnancy in the Omentum (Primäre Netzschwangerschaft) *Zentralbl f Gynäk* 19 4 xxviii, 1890

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

In the case reported the left tube was normal in the right there was a hematocele as large as a fist

The ovary and tube were removed and found macroscopically normal. Microscopic examination of the tube showed none of the changes of pregnancy. In the omentum which was otherwise normal, there was a bluish nodule as large as a walnut containing blood clots and chorionic villi. The villi were close to the omentum but not connected with it by syncytium or Langhans cells. Runce

Kerr J M M: Toxemias of Pregnancy and Their Effects upon Maternal and Infantile Mortality with Suggestions as to How the Association and the Public Health Department Might Assist in Lessening the Death Rate from Complications of Pregnancy and Parturition. *Pediatrics* 19 4 xxvi, 190  
By Surg. Gynec. & Obst.

In a concise way the author attempts to show that reporting of pregnancy should be made compulsory in order that the maternal and infantile death rate resulting from toxemias of pregnancy and other complications might be lowered. He states that in the Indoor Department of the Glasgow Maternity Hospital during the years 1901-1910 inclusive there were 293 cases of eclampsia of these 88 mothers died a maternal death rate of 30 per cent. As regards the children 208 were born dead or died, an infantile mortality of 70 per cent. Several of the mothers developed chronic Bright's disease and among the children who lived, several died shortly after birth and many were premature poorly nourished and started life very much handicapped. As evidence he says the average weight of the children was only five and three-quarters pounds.

In the same hospital during the same ten years, there were 121 cases of albuminuria with a maternal mortality of 70 or 8 per cent and an infantile mortality of 33 or 27 per cent. The author states that the above statistics go to show that if pregnant women were treated while they had albuminuria, and especially early a great number of maternal and infantile lives would be saved. He is of the opinion that the only solution of this problem is to have the public health department take charge of it and require reporting of pregnancy as they do with infectious cases. This would assist the poorer class of people and better enable them to receive the proper kind of advice at the right time. Wm D Phillips

Haughton S. The Prophylaxis and Treatment of Pre-Eclamptic Toxemia and Eclampsia. *Indian M Gaz* 9 4 xlii, 37

By Surg. Gynec. & Obst.

As prevention is better than cure it follows that the importance of prophylactic treatment cannot be too urgently insisted upon. As a means of accomplishing the above the author suggests that most careful attention should be paid to the patient's general condition. The following symptoms if complained of should be investigated at once: (1) Headache (2) disturbances of vision, (3) nausea vomiting and constipation (great care be taken to insure a daily evacuation of the bowels) (4) gastric pain

(5) edema of the limbs. He says that pre-eclamptic toxemia usually appears in the second half of pregnancy and but rarely in its later months.

The treatment suggested for pre-eclamptic toxemia consists in putting the patient to bed, for the first 24 hours giving only water and a large dose of epsom salts should the patient's condition remain the same bleeding and hypodermoclysis of saline solution should be resorted to. In spite of the above should the symptoms grow worse the author suggests emptying the uterus and the use of the following working rules: (1) If the patient is in labor and the cervix nearly fully dilated the dilatation should be completed version done or forceps applied. (2) If the patient is not in labor palliative treatment should be tried and if after two or three hours the progress of the disease is not arrested the uterus should be emptied by dilatation of the cervix after Harris's method or by either vaginal hysterotomy or cesarean section vaginal hysterotomy being the operation of choice during the early months of pregnancy. Gastric lavage bleeding injections of salt solutions etc should be used to eliminate the poisons most careful attention paid to the diet. Wk D PARKERS

Aachner B. Retrograde Amnesia Following Eclampsia. (Über die post klampsische Amnesie) *Ztschr f Geburt u Gynäk* 9 3 lxxv 405  
By Zentralbl f d. ges. Gynäk u Geburtsh d Grenzgeb.

The author observed two cases of true retrograde amnesia following eclampsia the loss of memory extending from several weeks to a year before the beginning of the attacks. The amnesia bore no relation to the number of the attacks. It was probably a deep-seated disturbance of the bonds of association between individual facts not a complete loss of the elements of consciousness involved (Von Strumpell) for many memories returned with the freshening of the associations. Probably closer examination will reveal the fact that retrograde amnesia is a regular feature of the symptom complex of eclampsia.

DOHN

Danforth W. C. Cesarean Section with Report of Fourteen Cases from the Service of Drs Parkes and Danforth *Illus in M J* 9 4 xv  
1 3 By Surg Gynec & Obst

This article is a short review of the literature with a brief report of 14 cesarean sections. They were performed for the following indications: Ovarian cyst, placenta previa, rigid cervix and deficient powers, 1 absolutely contracted pelvis, 1 eclampsia, 5 slight pelvic contraction, 2 uterine inertia. 1. CA EV COLBERTSON

Barris J. The Treatment of Pregnancy Complicated by Morbus Cordis, by Means of Cesarean Section under Spinal Anesthesia. *J Obst & Gynec B u Emp* 9 4 xxv 86  
By Surg Gynec & Obst

Five cases of the above are reported one of the author's and four from the literature. In the

author's case section was the operation of choice for the following reasons: (1) To practice rapid delivery some form of anesthesia was necessary. (2) A general anesthetic was contra indicated owing not only to the valvular lesions, but to the condition of the cardiac muscle therefore some special method such as local or spinal anesthesia was indicated. (3) Abdominal cesarean section was preferred to vaginal on account of the size of the child, and also because by the abdominal route a portion of both tubes could be removed and the patient be protected by rendering her sterile.

Stovaine, 0.1 gm with dextrose 0.05 gm dissolved in 1 ccm of sterilized water was injected between the third and fourth lumbar vertebrae followed by a second dose in twenty minutes. During the operation 1 ccm of pituitary extract was injected and oxygen inhalation administered. The blood pressure fell from 240 mm Hg to 160. Recovery was uninterrupted. The author makes these points in résumé:

1 It must be admitted that some cases of cardiac disease pass through labor unexpectedly well apart from this treatment.

2 On the other hand the method has the merit of great rapidity and of relieving the cardiac muscle of strain during the first and second stages of labor, thus diminishing the risks both of cardiac failure and of embolism.

3 Sterilization may be carried out at the same time.

4 There is no predisposition to uterine inertia especially where pituitary extract is given immediately before making the abdominal incision.

5 The child appears to run no risk from asphyxia crying at once after extraction.

6 No undue amount of shock was observed in the cases recorded.

7 The mental effect upon the patient is a possible drawback to the method. This may be minimized by administering morphia or scopolamine before the operation and by cocaineizing the skin prior to the injection of the spinal anesthetic.

CAREY COLBERTSON

Spalding, A. B. Some Principles Governing the Indications for Cesarean Section. *Calif St J Med* 9 4 xii 15  
By Surg Gynec & Obst

The author reviews some of the factors governing the indications for cesarean section tabulates his results in a series of 5 such operations and discusses the results. In a series of over 700 private and hospital maternity cases he found contracted pelvis in less than 10 per cent of the women and in but two of this number was the contraction of the conjugata vera  $7\frac{1}{2}$  cm. or less. Among his 25 cesarean operations 6 were done for moderate degrees of pelvic contraction, 4 of these being done with perfect results to mother and baby after a severe test of labor had failed to cause the head to engage, 4 were done for pelvic tumor, 3 for placenta previa with perfect results to both mother and baby, 2 with

broken compensation one with marked edema of the legs vulva and abdomen one for eclampsia and one for hyperemesis gravidarum

C D HOLM :

Hofmann E: Simultaneous Abortion and Tubal Sterilization (Zur einzeitige Abortleistung und Tubensterilisation) *Ztsch f Geb rsh G nsk* 1913 lxxv 310

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb

The author recommends Guggenberg Bern's transperitoneal abdominal method for the simultaneous induction of abortion and tubal sterilization. A median incision is made in the uterus so that the ovum can be removed with slight pressure. The cavity is curetted and the wound sutured with continuous catgut sutures. The tube is tied off from its mesosalpinx and ligated 1 to 2 cm from the angle of the tube with silk and the stump is buried beneath the peritoneum with continuous silk sutures. The drainage through the cervix recommended by Sellheim is considered superfluous. The results were excellent in 20 cases. SCHULTZ.

Ebeler F: Treatment of Abortion (Zur Abortbehandlung) *Ztsch f Geb rsh G nsk* 1913 lxxv 311

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb.

Ebeler reports the results of the treatment of abortion at the Cologne gynecological clinic for the past two years. Of 641 cases 76.9 were admitted in an afebrile condition 23.1 per cent febrile. When abortion was imminent conservative treatment was employed with very good results otherwise active treatment was used without regard to the bacteriological findings if the infection had not passed beyond the uterus. When possible curette with the finger was employed sometimes supplemented by a large curette. Dilatation was accomplished with laminaria or Hegar tents.

Of the 493 afebrile cases 41 abortions were imminent and proceeded without fever there were 7 artificial abortions afebrile 43 cases of endometritis after abortion fever only once for a short time after curettage 85 abortions in process with slight rises of temperature in two cases 316 incomplete abortions 290 of them free from fever 26 with fever afterward tumors of the adnexa and parametritis. There was no severe illness and no deaths.

Of the 148 febrile abortions the fever quickly disappeared in 2 imminent abortions 1 case of artificial abortion died of tuberculosis 17 abortions in process recovered quickly from the fever except one. Of 123 incomplete abortions the fever promptly declined in 94 in 29 the fever continued with complications in some cases 6 deaths 4.9 per cent. Three of these were admitted in a desperate condition died of pneumonia tuberculosis, 1 of sepsis from criminal abortion only 1 case could have been unfavorably influenced by the curettage. In conclusion the author recommends active treatment by digital curette without regard to the bacteriological findings. BOWEN

Traugott M: Active and Conservative Treatment of Streptococcus Abortion and Its Results (Aktive und konservative Behandlung des Streptokokkenaborts und ihre Resultate) *Ztsch f Geb rsh Gynäk* 1913 lxxv 375

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb

Traugott firmly believes in the conservative treatment of streptococcus abortion. His statistics include all the cases from the Frankfurt gynecological clinic. Of 246 cases with obligate saprophytes, 195 were treated actively 51 conservatively. Of 237 streptococcus abortions 99 were treated actively and 238 conservatively. Of those actively treated the process remained confined to the uterus in 67.7 per cent of the conservatively treated in 94.9 per cent. There were peritubal diseases and metastases in 14.1 per cent of the actively treated cases and in 2.9 per cent of the conservatively treated ones. In the former there was 18.1 per cent mortality in the latter 2.9 per cent. Deducting the criminal cases from the conservatively treated streptococcus abortions there remained 1 case of mild parametritis which recovered and 1 of purulent peritonitis that died that is 0.79 per cent mortality.

The active cases remained on an average 21 days in the hospital the conservative ones 23.4. Of 76 cases of streptococcus abortion that were admitted free of fever 40 were treated actively and 36 conservatively. Of those treated actively 47.5 per cent remained afebrile after treatment 32.5 per cent had fever 22.5 per cent had peritubal affections and metastases 7.5 per cent died. Of those treated conservatively 80.6 per cent remained afebrile 79.4 per cent had fever there were no peritubal diseases and no deaths.

The conclusions are: Every case of abortion must be examined bacteriologically. Saprophytic cases should be treated actively at once but streptococcus abortions should be treated conservatively that is, with rest in bed ice a avoidance of unnecessary examination and manipulations and after spontaneous evacuation of the uterus curette which is then without danger. Dangerous hemorrhage may constitute an indication for emptying the uterus but it is rare. The fact that there is no fever does not prove that no virulent germs are present. Bacteriological examination establishes the prognosis. In streptococcus abortion even when afebrile the prognosis is doubtful. The conservative treatment is always to be preferred to the active in streptococcus abortion and does not increase the duration of the sickness on the contrary it requires great courage to proceed actively. BUCHNER

Hofmann E: Coagulability of the Blood and the Blood Coagulation in Normal Hyperthyroid and Hypothyroid Women during Pregnancy and the Puerperium (Zur Blutgerinnung und zum Blutbild bei normalen, hyperthyreotischen und hypothyreotischen Schwangeren und Wochenenden) *Ztsch f Geb rsh Gynäk* 1913 lxxv 46

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb

In pregnant women with normal thyroids the coagulation time of the blood somewhat shortened

In pregnant women with large vascular soft gossers there is no variation from the normal coagulation time. In pregnant women with hypothyroidism the coagulation time seems to be somewhat shorter than in normal pregnant women but further research is necessary in order to determine this question definitely. In labor the coagulation time of the blood is reduced in about 50 per cent of the cases.

There is no difference between normal, hyperthyroid and hypothyroid patients. During the puerperium the coagulation time is gradually lengthened until it returns to normal. There is no difference in this particular in the three classes of patients. The blood count of normal pregnant women shows a slight leucocytosis involving all the cell forms. In pregnant women with hyperthyroidism in about 40 per cent of the cases there is a slight absolute and relative lymphocytosis which disappears immediately after delivery and reappears during the puerperium. In hypothyroidism the conditions seem to be normal. The freezing point of the blood of pregnant women is somewhat higher than that of non pregnant ones. In hypothyroidism there is no lowering as there is in the non pregnant condition. RUGGE.

Austin C. K. On the Isooserm Treatment of the Incoercible Vomiting of Pregnancy. *Med Rec* 94 122 705 By Surg Gynec. & Obst.

Austin details the theory of Fleux of Bordeaux regarding hyperemesis gravidarum which states that during the period in which the chorionic villi flourish and up to the time when they all disappear except those which have given rise to the placenta the syncytial cells covering the villi secrete a poison which when taken up by the maternal circulation intoxicates the mother and produces the early vomiting of pregnancy. The presence of the toxin determines an antibody reaction and on the more or less prompt and effective response on the part of the maternal organism depends the degree of vomiting.

Isooserm therapy depends upon the intravenous inject on of blood from a non toxic pregnant woman whose pregnancy is of about the same duration as that of the patient.

The only drawback to the method is the difficulty of making certain that the blood of the donor is innocuous. To this end the Wassermann and tuberculin reactions should be studied.

EDWARD SCHUMANN

Von Bardeleben H. Principles of Treatment in Pregnancy Complicated by Pulmonary Tuberculosis (Die Prinzipien des therapeutischen Eingriffs bei Lungentuberculose und Schwangerschaft). *Med Kl* 7: 193 5, 440. By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb.

Basic principles of treatment in pregnancy complicated by pulmonary tuberculosis are: (1) Old

healed non active tubercular processes in the lungs do not furnish an indication for abortion. The condition should be carefully watched however for there is a possibility of reactivation. (2) In pulmonary tuberculosis that can be demonstrated clinically abortion should be performed. Involvement of the apices up until the fourth month simply emptying the uterus is sufficient. (3) In advanced active processes in the lungs and in apical affections after the fourth month extirpation of the uterus is necessary in order to remove the site of the placenta. In all operations the general treatment must not be neglected. GRUBBER.

Ludwig F. Ileus in Pregnancy Labor and the Puerperium (Ileus bei Schwangerschaft Geburt und Wochenbett). *Ztschr f Geburtsh u Gyn* 84 1913 129 321. By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb.

The author reports 96 cases of ileus. The cause was adhesive bands in 28 cases, volvulus in 13, large or retroflexed uterus in 10, once linking of the mesentery and artery tumor in 25 cases, obstructions in 7, invagination in 4, and hernia in 7. The small number of cases due to hernia is noteworthy. It may be said that pregnancy offers a certain protection against incarceration of hernia. Except in the cases of tubal pregnancy the complication appeared when the uterus began to emerge from the true pelvis. The number of cases increases toward the end of pregnancy and a considerable number were observed during the puerperium. The pregnant or puerperal uterus is rarely a direct cause of the ileus. Diagnosis is very difficult and a careful history is important. The prognosis is very unfavorable. The mortality of the mothers was 55 per cent. In only a few cases has pregnancy continued to term and a living child born. Treatment is operative. In the early months of pregnancy an attempt should be made to preserve it at the end of it immediate delivery should be performed. BEYER.

Tylecot F. E. Jaundice of Pregnancy Associated with Jaundice in the Offspring. *Med Ch* 1- de 94 1 1465. By Surg Gynec. & Obst.

The author reports a case of recurrent jaundice in eight successive pregnancies—eventually persistent with xanthoma and jaundice in all but the first of the eight children. fatal in six of the seven afflicted. The patient 34 years of age was admitted for persistent jaundice accompanied by a marked xanthomatous condition which had started on the face and hands. She had been married when 18 years of age and had since then borne eight children of whom only the fifth was alive. Every child had been born prematurely. She had never suffered from jaundice before her marriage and in each pregnancy it appeared about the third month and increased until the end of pregnancy. All the children except the first which lived only an hour had jaundice. The other seven children all had jaundice.

six dying with convulsions due to it. The fifth child was the only one which recovered from the jaundice and it was noted that it was the only one that was breast fed.  
Wu D. PAILURE.

Vogt E.: Significance of Kyphoscoliosis in Pregnancy Labor and the Puerperium (Über die Bedeutung der Kyphoscoliose für Schwangerschaft, Geburt und Wochenbett) *Arch f Gynäk* 1914, 49, 60.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In cases of severe rachitic kyphoscoliosis of the spinal column the first menstruation generally appears late. Many primiparae have passed the thirtieth year. Spontaneous abortion and premature delivery is frequently observed. Symptoms of heart insufficiency frequently appear during the second half of pregnancy or even during labor that had not been observed in the non pregnant state. In rare cases death occurred from heart failure during labor or a few hours afterward. Most of the women did not die however during or soon after labor from heart disease but during the puerperium from complicated lung diseases. If there is marked failure of compensation during pregnancy which does not yield readily to medical treatment immediate artificial abortion is indicated preferably vaginal or abdominal cesarean section. Operative delivery must not be delayed too long. The outlook for the children is not bad. The loss of blood in the third stage is generally increased. Ru. ca.

Goulloud: Pregnancy after Myomectomy (Grossesse après myomectomie) *Lyon méd.* 9, 4, 576.  
By Journal de Chirurgie.

Goulloud is a firm believer in myomectomy. His cases of fibroids number 648 in 74 of which myomectomy was performed and abdominal hysterectomy in 574 which gives 11 per cent of myomectomies. After these 74 myomectomies there were five cases of pregnancy but out of the 74, 34 were single there remain therefore 40 married women with 5 cases of pregnancy or 12 per cent and among these 14 were past 40 years of age so that pregnancy would have been rare without myomectomy. This leaves 26 married women under 40 years of age 5 of whom became pregnant or 20 per cent. This figure is still possibly too low for 16 of the patients were not seen again.

There was no trouble in the development of the pregnancy and there were not more than 30 per cent of miscarriages. There was nothing abnormal during delivery. In short the results of myomectomy are in general satisfactory. Recurrences are rare and the high pregnancy is not frequent. It is possible and is worth the risk of a second operation ten years later.

In a recent thesis Benoit Gossin, a pupil of Goulloud has collected 90 cases of pregnancy after myomectomy and besides the cases given above cites unpublished cases of Pollosson and 4 of Témoins.  
R. L. L. R. L.

Bondi J. and Bondi S.: Experimental Study of Kidney Changes in Pregnancy (Experimentelle Untersuchung über Nierenveränderungen in der Schwangerschaft) *Arch f Gynäk* 9, 4, 89.  
By Zeitschr. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

From their experiments on pregnant and non-pregnant animals the authors have come to the conclusion that the kidneys of pregnant animals are more sensitive to toxins. The functioning parts of the kidney are not equally affected. They found that there were marked differences in the reaction of different parts to uranium and chromium while there were only slight differences with arsenic and cantharidin.

The epithelium of the urinary tubules and especially the convoluted tubules seems very easily affected in pregnancy. If conclusions can be drawn from animal experiments it is the sensitivity of the epithelium that cause albuminuria in so many pregnancies. More pronounced disturbances may cause severe nephritis. Different causes may produce the injuries to the epithelium. As the etiology of parenchymatous nephritis is generally bacterial infection frequently originating in the tonsils, in the nephritis of pregnancy this point should be considered. In some cases examination showed a preceding angina. The severe oedema that frequently appears early was regarded as the result of retention of chlorides. Bertram.

Kaltschnegg: Function of the Ureter in Pregnancy (Ureterfunktion in der Schwangerschaft) *Ztschr. f. Gynäk. u. Urol.* 9, 3, 186.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Kaltschnegg performed chromocystoscopy on 50 pregnant women who had no abnormal symptoms and from the difference in time in the appearance of the first blue color and the difference in the intervals between contractions on the right and left sides comes to the conclusion that there is a certain degree of physiological stasis of the urine in pregnancy which is due to changes in the anatomical relation of the ureters to the surrounding parts. Under some conditions this may give rise to colic and pyelitis.

In only 18 per cent of the cases was there normal function with relation to the two points mentioned above. In 44 per cent the right ureter excreted later than the left in 14 per cent the left later than the right, in three cases the right ureter was empty. The difference in time between the two was 4 to 15 minutes. The first blue color normally appears in about 14.4 minutes. The interval between contractions which is normally about 30 seconds was unequal in 29 cases being delayed about 7 seconds on the right side. The cause of the stasis is the torsion of the ureter to the wall of the pelvis about 10 to 15 cm above the opening into the bladder. By dextroposition of the uterus the right ureteral ligament is twisted so that the trigone stands open toward the left. By this torsion the first right ureter is kinked and then the left.  
FRANK.

Müller B: The Relation of the Thyroid Gland to Pregnancy Labor and the Puerperium in the Endemic Götter Region of the Canton of Bern (Das Verhalten der Glandula thyroidea im endemischen Kropfgebiet des Kantons Bern zu Schwangerschaft Geburt und Wochenbett) *Ztschr f Geburtsh u Gynäk* 1913 lxxv 264  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The female sex shows a special predisposition to diseases of the thyroid which is probably caused by influences proceeding from the female genitalia. The preponderance of thyroid disease dates from the age of puberty almost 7 per cent of the women of the endemic gouter region of Bern trace their gouter to puberty. Nineteen per cent of the women have a swelling of the neck at this period and in some cases this swelling leads to a permanent gouter.

The chief cause of the preponderance of thyroid disease in women however is pregnancy and labor. It is unusual to find a normal thyroid in a pregnant woman in a gouter region. Primiparae generally show a slight swelling of the thyroid multiparae show parenchymatous nodular and vascular goiters. The more pregnancies a woman has had the more tendency she shows to thyroid disease especially to nodular and cystic degeneration. In 57 per cent of the cases the swelling disappears again during the puerperium. The decrease in size is the greatest in vascular goiters. In 7 per cent of the cases the swelling progresses delivery may be the starting point of a permanent gouter.

Functional disturbances of the heart are unusual in pregnancy. A healthy heart is not especially affected by thyroid disease even in pregnancy. Endemic gouter in Bern is the chief etiological factor in contracted pelvis which is so general. Among the diseases of the thyroid aplasia and hypoplasia or cretinism cause the extraordinary frequency of this form of pelvis. RUNK

Kuschtaff N J: Spontaneous Recovery in Complete Rupture of the Pregnant Uterus (Über die Selbstheilung der vollständigen Risse des schwangeren Uterus) *Ztschr f Geburtsh u Gynäk* 1913 lxxv 743  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

A 37 year-old VIII para, two weeks before delivery was expected fell from a wagon on her back. Foetal movements stopped soon after the accident. The next day hemorrhage commenced and lasted four days. After 4 weeks the patient was able to work again and the menses recommenced. Seven months later the patient came with the request that the foetus be removed as it interfered with her work. On laparotomy the foetus was found free in the abdominal cavity adherent to the peritoneum omentum and intestine. In the anterior wall of the uterus there was a tear 3 cm long. The foetus was freed from adhesions and removed and the rupture in the uterus sutured. Recovery was uneventful. The membranes were adherent to the foetus. Microscopically there were great changes in the membranes skin muscle tissue and blood vessels.

From his own and similar cases the author comes to the conclusion (1) In spite of recovery the capacity for work of women who have fetuses in the abdomen is decreased. (2) Such fetuses are always a menace for the rupture in the uterus leaves an opening through which bacteria of putrefaction may reach it. (3) The kind of microscopical changes in the organs of the encapsulated foetus depend on the presence of bacteria of putrefaction. (4) Spontaneous recovery does not take place in complete rupture of the uterus. GROSSBAUC

Schantz F: Rachitic Pelvis Simulating Osteomalacia and Pregnancy (Pseudo-osteomalacisches [rachitisches] Becken und Gvidit t) *Wien med Wchnscr* 1914 lxxv 27  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

In the pelvis of osteomalacia the pubis is very narrow. In the rachitic pelvis it is very wide thus being the distinguishing feature between the two. The pelvis of pseudo-osteomalacia is very similar to that of osteomalacia but is caused by rickets. The acetabula are pushed forward and the pubic bone is narrow. This form is very unusual in adults and is only found when the rickets has been of extreme degree. In the author's case there was a two months pregnancy. The history showed that the patient had not walked until her fourth year. Her lungs had been affected since early life and later she was treated for oöphoritis at that time she was told that normal delivery would be impossible for her. She was 132 cm in height the diagonal conjugate 87 the true conjugate 57 to 67. She had a short plump thigh with the tibiae very much bowed. Because of the narrow pelvis and the lung disease abortion was indicated. Sterilization should also be considered. HEIMANN

## LABOR AND ITS COMPLICATIONS

Stempel A: Extraction with Kustner's Breech Forceps (Zur Extraktion mit Kustner's Stemsbaken) *Ztschr f Geburtsh u Gynäk* 1913 lxxv 487  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The author has used Kustner's breech forceps in three cases with good results. The forceps should be applied only to the posterior hip. The anterior hip serving as a fulcrum. The technique varies with the case. If applied only to the posterior hip and the right technique be used this method is a useful and harmless one for both mother and child in cases where the anterior foot cannot be brought down and a purely manual extraction is not possible. It seems destined to reduce the mortality of the infants in breech cases. SCHIFFMAN

Philips T B: Delivery of Two Children from a Double Uterus (Doppelte Geburt bei Uterus duplex) *Vierteljahrsschr f Geneeskunst* Amst 1914 9 65  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

The case is that of a 33 year-old prim para whose physician at the beginning of pregnancy had made a



six dying with convulsions due to it. The fifth child was the only one which recovered from the jaundice and it was noted that it was the only one that was breast fed.

Wm. D. Phillips.

Vogt E.: Significance of Kyphoscoliosis in Pregnancy Labor and the Puerperium (Über die Bedeutung der Kyphoscoliose für Schwangerschaft, Geburt und Wochenbett.) *Arch. f. Gynäk. 914* cu 60

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In cases of severe rachitic kyphoscoliosis of the spinal column the first menstruation generally appears late. Many primiparae have passed the thirtieth year. Spontaneous abortion and premature delivery is frequently observed. Symptoms of heart insufficiency frequently appear during the second half of pregnancy or even during labor that had not been observed in the non pregnant state. In rare cases death occurred from heart failure during labor or a few hours afterward. Most of the women did not die however during or soon after labor from heart disease but during the puerperium from complicated lung diseases. If there is marked failure of compensation during pregnancy which does not yield readily to medical treatment immediate artificial abortion is indicated preferably vaginal or abdominal caesarean section. Operative delivery must not be delayed too long. The outlook for the children is not bad. The loss of blood in the third stage is generally increased. *Russak.*

Goulloud Pregnancy after Myomectomy (Gross-ease après myomectomie) *Lyon méd. 914* 576

By J. urral de Chirurgie

Goulloud is a firm believer in myomectomy. His cases of fibroids number 648. In 74 of which myomectomy was performed and abdominal hysterectomy in 574 which gives 12 per cent of myomectomies. After these 74 myomectomies there were five cases of pregnancy but out of the 74, 34 were single there remain therefore 40 married women with 5 cases of pregnancy or 12 per cent and among these 14 were past 40 years of age so that pregnancy would have been rare without myomectomy. This leaves 6 married women under 40 years of age 5 of whom became pregnant or 20 per cent. This figure is still possibly too low for 6 of the patients were not seen again.

There was no trouble in the development of the pregnancy. There were not more than 20 per cent of miscarriages. There was nothing abnormal during delivery. In short the results of myomectomy are in general satisfactory. Recurrences are rare and though pregnancy is not frequent it is possible and is worth the risk of a second operation ten years later.

In a recent thesis Benoit Gossin, a pupil of Goulloud's has collected 99 cases of pregnancy after myomectomy and besides the cases given above cites 2 unpublished cases of Pollosson and 4 of Témoin.

R. LEXCHER

Bondt J and Bondt S.: Experimental Study of Kidney Changes in Pregnancy (Experimentelle U. tersuchung über Nierenveränderungen i der Schwangerschaft) *Arch. f. Gynäk. 194* cu 89

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

From their experiments on pregnant and non-pregnant animals the authors have come to the conclusion that the kidneys of pregnant animals are more sensitive to toxins. The functioning parts of the kidney are not equally affected. They found that there were marked differences in the reaction of different parts to uranium and chromium while there were only slight differences with arsenic and cantharidin.

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Kaltschnegg: Function of the Ureter in Pregnancy (Ureterfunktion in der Schwangerschaft) *Zisch f. Gynäk. U. 913* v 186

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

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FRANK

Müller B The Relation of the Thyroid Gland to Pregnancy Labor and the Puerperium in the Endemic Goiter Region of the Canton of Bern (Das Verhalten der Glandula thyroidea im endemische Kropfgeliet des Kantons Bern u Schwangerschaft, Geburt und Wochenbett) *Ztschr f Geburt u Gynäk* 19 3 lxxv 64  
By Zentralbl f d ges Gynäk u Geburtsh u d Grenzgeb.

The female sex shows a special predisposition to diseases of the thyroid which is probably caused by influences proceeding from the female genitalia. The preponderance of thyroid disease dates from the age of puberty almost 7 per cent of the women of the endemic goiter region of Bern trace their goiter to puberty. Nineteen per cent of the women have a swelling of the neck at this period and in some cases this swelling leads to a permanent goiter.

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Ruvanz

Kuscheloff N J: Spontaneous Recovery in Complete Rupture of the Pregnant Uterus (Über die Selbstheilung der vollständigen Risse des schwangeren Uterus) *Ztschr f Geburtsh u Gynäk* 9 3 lxxvii, 743  
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GRUBER

Schauta F Rachitic Pelvis Simulating Osteomalacia and Pregnancy (Pseudo-osteomalacisches [rachitisches] Becken und Gravidität) *Wien. med Wochenschr* 1914 lxxv 27  
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HEIMANN

## LABOR AND ITS COMPLICATIONS

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SCHIFFMAN

Philips, T B Delivery of Two Children from a Double Uterus (Doppelte Geburt bei Uterus duplex) *Nederl Tijdschr Geneesk* Amst 914  
A 9 63  
By Zentralbl f d ges Gynäk u Geburtsh u d Grenzgeb.

The case is that of a 35 year-old primipara whose physician at the beginning of pregnancy had made a

diagnosis of double uterus. A septum could be felt in the vagina and the fundus showed a deep depression in the middle. On the 26th of August there was spontaneous rupture of the membranes with an opening of 3 cm. There was breech presentation, pains in both horns of the uterus often unequal in degree. On the 27th of August at noon dilatation was complete and a living child 50 cm. long weighing 2220 gm. was extracted. The placenta remained and the left uterus became smaller. On the morning of the 28th on account of hemorrhage the left placenta was expressed by Crede's method and the membranes on the right ruptured. On the morning of the 29th there was a slight rise in temperature 38.5. A living girl was extracted weighing 2260 gm. and 46 cm. in length. Three hours later the right placenta was removed manually. The left uterus was found to be well contracted and the os closed. The puerperium was normal. The first child had taken the breast before the second was born. On the 18th of November the patient was examined again; the septum was still present in the vagina. Both children were nursing and each weighed 3700 gm. STRAUSS

Zalewski E. Duplication of the Female Genitalia and Its Consequences in Dell ery (Doppelbildungen der weiblichen Genitalsphäre und ihre Folgen für die Geburt). *Arch f Gynäk* 914 11 89

By Zentralbl f d ges Gynäk. Geburtsh. d. Grenzgeb.

This paper constitutes a report of 14 deliveries in cases of duplication of the uterus of varying degrees with and without involvement of the vagina. Complications during delivery were frequent. There was a tendency to abortion and spontaneous premature delivery. Abnormal presentations interfered with delivery by the vaginal septum, primary and secondary inertia, retention of placenta and hemorrhage which may be caused by the placenta being situated on the septum of the uterus and hemorrhage from rupture of the septum in the uterus. An especially interesting case is one of twin pregnancy a fetus being contained in each half of the uterus and the birth of the second child being very much delayed. In another case premature delivery was induced on account of contracted pelvis and the bag inserted for this purpose entered the empty half of the uterus, simulating rupture of the uterus, but no serious complications took place. HIRZOO

#### PUERPERIUM AND ITS COMPLICATIONS

Donaldson, A. A Case of Puerperal Fever Associated with the Enterococcus. *J. F. Med. & Surg.* 9 4 221, 469. By Surg. Gynec. & Obst.

Donaldson reports a case of puerperal fever associated with the enterococcus in a multipara. On the eighth day after parturition the patient complained of pain at the base of the right leg and her temperature rose to 100.4 F. In spite of treatment

the temperature remained with a slight morning remission. Ten days later a catheter specimen of urine was found to contain pus, red blood corpuscles and bacteria which were found in short chains composed of a somewhat elongated gram positive coccus arranged in pairs with an apparent capsule around them. Many were present simply as isolated diplococci. A pure growth was easily obtained on agar and in broth in twenty-four hours. The same organism was isolated from the uterus. It was not found in the blood. A vaccine was made and administered.

Following the second dose of vaccine the temperature fell below normal for the first time in twenty days. It rose again but after the fourth injection and the administration of acetyl salicylic acid it remained subnormal. During the rise the patient developed pain and tenderness in both thighs. She gave a history of previous illnesses in which enteric fever and dysentery seemed to play an important part. The bacteriology of these conditions has not been investigated.

The author then enters into a minute discussion of the bacteriology of the organism found. He reaches the following conclusions:

1. The organism appears to be a harmless saprophyte which may assume a mild degree of virulence.

Its normal habitat is probably the intestine since the majority of lesions caused by it may be referred to the gut or to its vicinity.

3. Morphologically there is nothing sufficient to mark it out as a species deserving of special recognition.

4. It is characterized by longevity and by the fact that it will grow fairly well at low temperatures (15° C.).

5. This last fact and its sugar reactions serve to mark it off from the pneumococci while its growth on solid media and its sugar reactions enable it to be distinguished from streptococcus mucosus and other capsulated streptococci.

6. In its sugar reactions it corresponds most closely with streptococcus faecalis.

7. From a consideration of these facts there seems no justification for a special name—enterococcus—since it appears at most to be merely a variant of the faecalis group. EDWARD L. CORNELL

Allmann Inversion and Total Prolapse of the Puerperal Uterus (Uterus et Prolapsus totalis uteri puerperalis). *Deut. Med. Wochenschr.* 9 4 21, 2.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

Two of the author's cases are described. The first was that of a 35-year-old III para in whom severe hemorrhage began shortly after spontaneous delivery. The author saw her an hour after delivery and found her very anemic. The inverted uterus lay between her thighs, with the placenta in its fundus. This was removed and reversion easily accomplished. The woman died two hours later.

In the second case the physician had performed Credé's expression for severe hæmorrhage and caused a total inversion. The patient was admitted to the author's hospital two hours later but the uterus could not be replaced. Total extirpation of the uterus by the abdominal route was therefore performed and the patient discharged well after two weeks.

Any sort of traction may cause inversion and pressure may start it but not complete it. The prognosis is unfavorable. The best treatment is prophylaxis and all unnecessary manipulations of the flaccid uterus are especially to be avoided. Treatment must take into consideration also hæmorrhage and shock but in general immediate reposition should be attempted. In complicated inversions the danger of shock is not so great.

Severe hæmorrhage must be treated by the usual methods. Sudden springing back of the uterus must be prevented and if reposition is not successful or infection is suspected the uterus must be extirpated. In desperate cases when the woman cannot stand anaesthesia the uterus may be constricted with elastic bands to stop hæmorrhage. The strength especially of the heart must be supported in every way in order to gain time for reposition. In cases where the heart is affected the expectant treatment is probably justified. BRYMAN

Peterson L.: A Case of Rupture of the Cervix Post Partum (Ein Fall o. Ruptura colla t. n. post part m). *Finsk Läk Händl.* 913 lv 744.  
By Zentralbl f d ges Gynäk u Geburtsh. d Grenzgeb.

A 22 year old woman who had always been well gave birth to a foetus in the eighth month of pregnancy after three days labor. It was delivered through the posterior wall of the cervix. The size of the pelvis was normal, the cervix and external os normal. No process which could have limited the space in the pelvis could be demonstrated. The woman became pregnant repeatedly but the pregnancy ended each time with hæmorrhage and abortion. It is noteworthy that in spite of the direct communication between the inside of the uterus and the vagina a foetus could develop to maturity. If pregnancy should occur again cesarean section would be indicated. Byd KEVENEZ

#### MISCELLANEOUS

Green R. M.: Intracranial Hæmorrhage in the New Born. *Boslo H & S J.* 1914 clxx 68.  
By Surg. Gynec. & Obst.

The author reports seven cases of intracranial hæmorrhage in new born babies giving the most morient findings. In two cases there had been a difficult forceps delivery and in one a low forceps following a tedious labor. Two cases occurred after what seemed easy labors. And there were two cases of hæmorrhagica neonatorum. His conclusions are:

Intracranial hæmorrhage may occur in the new born either from the trauma of operative or

normal labor or in association with hæmorrhagica neonatorum.

2 It often does not present the typical clinical picture of increased intracranial pressure.

3 Its presumptive diagnosis depends on early recognition of refusal to nurse, pallor, and slight facial oedema which may be confirmed by the appearance of more classic signs.

4. Diagnosis may be positively established and some therapeutic relief afforded by lumbar puncture when the hæmorrhage is infratentorial or by cranial puncture when the hæmorrhage is over the cerebral convexity.

5 If these measures fail to give relief operative decompression by craniotomy is indicated.

6 The majority of intracranial hæmorrhages in the new born are subdural but intraventricular hæmorrhages may also occur.

7 The source of bleeding may be from laceration of the tentorium of the choroid plexus of the longitudinal sinus and of the pial vessels.

8 In cases associated with hæmorrhagic disease preliminary transfusion may be indicated before craniotomy.

9 The gravity of the prognosis demands an enlightened prophylaxis by avoiding all unnecessary occasion for foetal trauma. C. H. DAVIS

Groné O.: Epidural Hæmatoma in the Spinal Canal of the New Born (Epidurales Hæmatom im Rückenmarkskanal bei Neugeborenen). *Zent bl f Gynäk.* 1913 xxxvi 849.  
By Zentralbl f d ges Gynäk u Geburtsh. d Grenzgeb.

This is a report of four cases of epidural hæmatoma in the spinal canal without visible injury of the vertebrae or ligaments. The author believes that such cases are more frequent than is generally known because on autopsy the spinal canal is seldom opened. Especially in small children,—for example twins—and prematurely born children he thinks the hæmatomas may be caused by injury to the vessels from torsion of the spinal column during delivery. In the cases described the Wassermann reaction was negative in the mother. K. HOFFMANN

Brattstrom, E.: A Case of Quadruplets from Four Ova, with a Discussion of Quadruplets in General (Ein Fall von vierzue Vierlingen nebst einigen Beobachtungen in Bezug auf Vierlingsgeburten im allgemeinen). *Allm S Läk.* 913 x 370.

By Zentralbl f d ges Gynäk u Geburtsh. d Grenzgeb.

A 33 year-old multipara herself a twin gave birth to quadruplets weighing 2400 3370 1980 and 2720 gms respectively. The maternal grand mother and one sister of the patient had borne triplets. All four children were boys and three were born alive. They showed all the signs of maturity and were well nourished. Since the mother's milk was not sufficient it was supplemented by some bottle feedings. On the third day after birth all three showed slight icterus. One of the three died after

five weeks of general debility the others remain well. The collective weight of the placenta was 1000 gms. Three of them were separated by well marked septa the other was completely separate. The foci had developed from four separate ova. In Sweden from 1751 to 1910 an average of 3531 births there were 64 cases of quadruplets.

Hjo KRANTZ.

Hallantyne J W: Stillbirths Registration J  
Of the Year 1914. Imp 114.  
By Surg. Gyner & Obst.

This article is a preliminary with respect to the rational and particularly to the question of stillbirth. While acknowledging that some of his propositions are revolutionary as far as legal regulations in England are concerned the author "as the following definitions of the incorporation in the rules governing vital statistics."

1. For a stillbirth the complete expulsion from the maternal birth canal of a child which survives before birth the characters of ante and post-natal life especially heart-beat, sternal pulsations and movement.

2. For a stillbirth the complete expulsion from the maternal birth canal of a child which while it bears pulsations in the cord is still to the other characters of an ante-natal life the signs of post-natal vitality viz pulmonary respiration and cry.

3. For a stillbirth the complete expulsion from the maternal birth canal of a child which while it continues to exhibit one or more of the signs of an ante-natal life, i.e., heart-beat, sternal pulsations or some vital signs, at a time at which it is of post-natal life—pulmonary respiration, cry, etc.—and then either loses even the characters of an ante-natal life or succumbs to resuscitation (for resuscitation).

4. For abortion or miscarriage the termination of a tenatal life before the end of the sixth month after the expulsion of the uterine contents is suggested. A premature birth is expulsion of the uterine contents after the sixth month but before the full term and it may be a dead birth, a live birth or a stillbirth. C. J. CRANSTON.

Murray I: The Immunological Relationship of Mother Foetus and Placenta. Med Press & Cur 1914, vol. 435. By Surg. Gyner & Obst.

The experimental work of recent years has demonstrated that the relationship of mother and foetus is comparable to that of host and parasite rather than to myxomatosis. Little is known of the relation of normal to toxic pregnancy but the pregnant animal is well known in its body fluid of an active process whereby it immunizes itself against the ovum, a small part of it. A number of writers have treated this as a process of pregnancy by injecting quantities of serum from locally healthy pregnancy and with considerable degree of success. But as pregnancy is a process in the serum and a labile reaction there can be no very great amount of protective immunity.

Although the resemblance between anaphylaxis and eclampsia is purely superficial the author believes there is an excuse for judging eclampsia to be an anaphylaxis in pregnancy. Experimental work in various laboratories makes it certain that an animal can be sensitized by an injection of placenta from its own species. Placenta seems to be the only tissue which has this property, for example, it extracts under the same conditions will not do so. This remarkable result makes it plain that there is some factor in the placenta of any species which is alien to the blood of that very species. Sensitization is never levelled with purely homologous tissue. Placenta must contain some body known as an antigen which is capable of producing antibodies in the species, that is the stimulation of the body tissues and fluids to immunize themselves. That sensitization has occurred is readily proved by the anaphylaxis which immediately follows a second and larger injection.

It has been proved that pregnant animals are already sensitized to placenta as the single largest vessel does not produce anaphylaxis. This is even more marked in very early pregnancy.

There is evidence that there is some antigen common to foetus and placenta as an animal sensitized to foetal serum can be made to anaphylaxis when placental extract is the second injection. However, the author believes that the antigen in pregnancy is a purely placental one and animals born of mother and foetus.

Complement fixation reaction which demonstrates the presence of an antibody have proved positive with foetal plasma and in early pregnancy also from the fifth to the fifteenth week and possibly a period with the fullest development of trophoblastic activities.

By means of a ingenious and delicate apparatus known as Weichand's fluorometer which measures the rate of diffusion of two liquids placed in juxtaposition it is possible particularly in the latter months of pregnancy to show a distinctive reaction when placental extract plus pregnant serum is compared with placental extract plus non-pregnant serum. This reaction according to Weichand is mainly a reaction of antitoxin and is of interest in that it shows an increase of diffusion from the antigen antibody reaction already described.

The author describes briefly the "Abderhalden dialytic reaction" which states that like other antigen body reactions it is better marked in early pregnancy. C. H. D. VAN.

Dehne K.: Can an artificially Induced Pregnancy be Made in Man with Abderhalden's Dialysis? (Last volume in Abderhalden's Dialysis of the body fluids of the human body). J. Traubner & Co. Leipzig, 1914. 114 pp. 1/2.

By Zentralblatt für Geburtshilfe und Gynäkologie. The Kiel gynecological clinic does not believe that dialysis can be used as a method of reaction for pregnancy. Kurt recently performed a series of experiments with

cows 2 of which were pregnant in the first month 8 in the second 6 in the third, 4 in the fourth and 4 in the fifth. Almost all the sera were tested with both the maternal and fetal part of the placenta. A dose of 2.5 ccm of cow's serum was regarded as the optimum dose.

The results were as follows. With a dose of 1 ccm of serum all four of the pregnant cows examined reacted negatively. With a dose of 1.5 three cows were tested with both parts of the placenta and gave a questionable reaction. A non pregnant cow gave the same reaction. Another non pregnant cow reacted negatively. With a serum dose of 2 ccm the reaction in 6 pregnant cows was not definitely positive. With a serum dose of 2.5 ccm among twelve pregnant cows tested half reacted negatively. Of the rest only three gave a certain though only weakly positive reaction two with the maternal and one with the fetal part of the placenta. Of the 9 non pregnant cows tested with the same dose of serum the reaction was completely negative in only 5 cases 3 of them reacted positively. In its present form Abderhalden's dialysis does not give a certain diagnosis of early pregnancy. *REVIEWS*

Wall R. L. M. The Value of Abderhalden's Tests in the Diagnosis of Pregnancy. *J Obst & Gyn Brit Emp* 94 1917, 53  
By Surg Gynec & Obst

This article is rather in the nature of a critical review of work already done. At the same time the author reports his own results based upon tests of the sera of 50 pregnant women. In brief his conclusions are:

1. The serum of pregnant women contains a specific ferment capable of digesting placental tissue and this ferment can be detected from the eighth week of pregnancy until ten days after delivery both by the optical and by the dialyzation test.

2. That both tests should always be applied to the serum from the same case and that the accuracy of the results depends entirely upon the most scrupulous care in details of technique.

3. That the tests appear to be of value in diagnosis more especially in the following conditions: (1) The early diagnosis of pregnancy (2) the differential diagnosis between fibromyomata and pregnancy (3) the diagnosis of ectopic gestation (4) the diagnosis of chorio-epithelioma and (5) the presence of retained placenta.

4. That there is at present no justification for stating that the serum of pregnant women will digest other than placental tissue.

5. The claims of Abderhalden that the optical and dialyzation tests are of value in the diagnosis of pregnancy are established. *CARE CULBERTSON*

Fraenkel C. Serum Diagnosis of Pregnancy (Ein Beitrag zur Serodiagnose der Schwangerschaft). *Berl kl W Ansch* 93 1918  
By Zentrabl f d ges Gynak u Geburtsh d Grenzgeb

Where pregnancy was known to be present the antiproteolytic power of the mother's serum was

always increased. In clinically doubtful cases this increase was not found in the ones that turned out on further observation not to be pregnant but it was found in those that were really pregnant. There was only one exception to this: a case of high antitryptic titer without pregnancy. The sera of the non pregnant cases in most instances showed no increase in the antitryptic titer but there were a few rare exceptions.

The reaction is almost as marked in carcinomatous sera less so in patients with disease of the adnexa. Therefore the determination of the antiproteolytic power of the blood may be used in the diagnosis of pregnancy to the extent that a negative reaction proves the absence of pregnancy while a positive reaction must be accepted with some reservation as there are some exceptions. *JACKE*

Miller J W: Corpus Luteum and Pregnancy the Youngest Human Ovum Obtained by Operation (Corpus luteum und Schwangerschaft das jugendste operativ erhaltene menschliche Ei). *Berl kl W Ansch* 93 1918, 85  
By Zentrabl f d ges Gynak u Geburtsh d Grenzgeb

Ovulation precedes menstruation by about 9 days as shown by the experimental work of Fraenkel and Hirschmann Adler. Therefore the limit for fertilization is about 18 days after the beginning of the last period or in women who menstruate every three weeks about 11 days.

Miller proves the epithelial origin of the corpus luteum by demonstrating colloid drops inside the cells which are produced only by epithelium. The fresh corpus luteum gives no fat reaction neutral fat can be demonstrated only after the beginning of degeneration the eighth or ninth week. The corpus albicans arises from the disintegration of the fatty lutein cells by hyaline degeneration of the connective tissue reticulum.

The corpus luteum of pregnancy is characterized by colloid drops and calcium concretions with negative fat reaction. The corpus luteum is a periodically formed gland with internal secretion which causes increased size and turgor of the organ in the reproductive years cyclic transformation of the endometrium into decidua and insertion and development of the ovum and menstruation if it is not impregnated.

The author describes a case of removal of a cystic corpus luteum by laparotomy in a patient pregnant 7 or 8 weeks there was degeneration of the product of pregnancy without abortion. It is always the ovum of the first missed period that is impregnated implantation takes place not at the close of the last period but shortly before the time of the first missed one. The premenstrual change in the uterine mucous membrane is caused by the corpus luteum. As implantation takes place at the end of the first missed period the hitherto accepted duration of pregnancy must be reduced by about 19 days. The convulsions of pregnancy including eclampsia probably arise from a hypofunction of the corpus luteum and adnexa.

Menstruation is only a kind of periodic unburdening of the hyperemic uterus and has no importance in conception. The menstrual blood is probably the nutritive fluid for the ovum and is discharged after the breaking down of the nest of the ovum. Ruting and menstruation are developmentally and physiologically different phenomena. The implantation results from the active penetration of the ovum between two gland openings. Both components of the trophoblast are of fetal origin. The capillary endothelium and the gland epithelium are purely passive.

MORALLER

Von Neugebauer F: A New Series of 73 Cases of Twin Pregnancy with One Ovum Implanted Inside the Uterus and the Other Outside (Eine neue Serie von 73 Fällen isochroner heterotoper Zwillingschwangerschaft, das eine in intrauterin, das andere extra uterina implantiert, nebst Schlussfolgerungen). *Gynäk. R. n. d. h. 1913*, vi, 800.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Frauenz.

The author had previously published a monograph on this subject and has since collected 73 cases from the literature making 211 in all. The conclusions from all the statistics are as follows:

The frequency of such cases increases with progress in diagnosis and operative experience. In the first 10 cases the right diagnosis was made only 7 times before operation, while in the present series of 73 cases it was made 8 times.

The fate of the intra uterine fetus was not given in 22 cases, in 110 cases there was abortion, 57 of them spontaneous and 53 after surgical operations, 73 of the uterine pregnancies gave 76 mature and living children, there being twins in 16 of the uterus, in three cases, 35 of these children were delivered by abdominal incision.

It is hard to tell what became of the extra uterine fetuses, for in most cases there was no precise information. Among 38 cases the extra uterine fetus was extracted mature and living by abdominal incision 6 times. In not less than 35 cases both fetuses attained maturity. In one case there were mature triplets, two inside the uterus and one outside. The results to the mother are not given in 23 cases. Among the other 218 cases 53 died.

The mortality is constantly decreasing and will decrease still more when operation is always performed at the right time before the woman has lost too much blood. When extra uterine pregnancy is known or suspected operation should be performed at once, regardless of whether there is at the same time an intra uterine pregnancy or not. JAEGER.

Routh, A. The Need for Research in Antenatal Pathology. *B. M. J.* 9 4 1 90.  
By Surg. Gynec. & Obst.

The author states that in the study of antenatal pathology it is necessary to determine how prenatal and maternal disease, e.g., syphilis, tuberculosis, general diseases of the mother—such as smallpox, pneumonia, diabetes, toxemia of pregnancy, etc.

affect the fertilized ovum in its embryonic and in its fetal stages. Also the pathologist who would succeed must familiarize himself with postnatal pathology in all its variations.

Research can only prove whether in cases of maternal albuminuria or eclampsia the fetal organs participate in the pathological changes found in the mother in these diseases. In such serious and often fatal maternal toxic diseases every effort is concentrated upon the mother and pathology of the fetus which is often dead is liable to be disregarded.

Bacteriology has led to the discovery of the specific germ in many maternal diseases which cause fetal death and hence the task has now become much easier. This is especially true in the case of syphilis since not only the specific cause is known—*spirochaeta pallida*—but the means of making a positive diagnosis and giving specific treatment is at hand. Routh believes, as do many others, that the infection of the fetus is usually from the mother. Also that the maternal infection is transplacental. The effect of syphilis in causing abortions or stillbirths is still scientifically at least a debatable question. Clinically there is strong evidence to prove that syphilis is a cause of abortion and stillbirths.

Antenatal tuberculosis according to British authorities is almost non-existent. Very few children at birth show evidences of clinical tuberculosis and to prove or disprove the presence of antenatal tuberculosis is a problem not yet solved.

To further this spirit of research Routh suggests that all general and lying in hospitals be provided with antenatal research laboratories, so that the pathology along with the clinical observations of every abortion and stillbirth can be reported upon.

HARVEY B. M. THOMAS.

B. lat. R. C. Two Cases of Pregnancy in Uterus Subseptus. *B. M. J.* 9 4 1 907.

By Surg. Gynec. &amp; Obst.

Dunst reports two cases of pregnancy in uterus subseptus and refers to one previously described all having been seen within six months. Just how frequently malformations of the uterus occur it is impossible to say, but the question of their influence on the genital functions is of practical interest.

The chief disturbance in association with pregnancy are:

1. The second cavity has been said to explain cases of menstruation occurring during pregnancy in the other.

2. The formation of decidua in the second cavity may call for its definite expulsion at delivery and may give an unusual form of hemorrhage intra partum or post partum.

3. The unequal development of the uterine walls may provide a source of irregular contractions during labor or post partum, causing delay in delivery or post partum hemorrhage respectively.

4. Rupture of the irregularly developed uterus has been recorded frequently both at the fundus and at the cervix.

HARVEY B. M. THOMAS.

Jaschke R T Examination of Kidney Function in Pregnancy (Untersuchungen über die Funktion der Nieren in der Schwangerschaft) *Ztschr f gynäk Ust* 1913 lv 92  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

Formerly the judgment of the kidney condition in pregnancy was based too much on anatomical changes the function being scarcely considered at all. The anatomical changes cannot explain the wide differences in individual cases. The author carried out functional tests by von Schlayer's method on 20 normal pregnant women with urine free from albumin and got noteworthy results.

According to Schlayer the excretion of potassium iodide gives information as to the condition of the tubules, that of milk-sugar as to the condition of the vessels. Almost all the cases showed an acceleration in the excretion of potassium iodide of 24-28 hours—normally 0.5 gm potassium iodide is excreted after 40 hours. The milk-sugar excretion on the contrary was delayed except in three cases to as much as double the normal time which is 1 gm in 4 to 5 hours.

The hastening of the potassium iodide excretion indicates an increased functional activity of the tubules which the author regards as a process of adaptation to the pregnant condition. In 4 pathological cases the test showed a delay in the milk sugar excretion in one case to 33 hours, and also a delay to almost double the normal time for the potassium iodide excretion. In the puerperium there was an extraordinarily quick return to normal conditions. Perhaps the functional decreased sensitiveness of the blood vessels in the decrease of the diuresis and the salt quotient plays a great part. DORV

Hendley P A Pituitrin in Labor *Bst M J* 1914 i 906  
By Surg Gynec & Obst

Hendley strongly favors the use of pituitrin when the indications are present and gives a word of warning against its use in those cases presenting any

obstruction to the presenting pole. It is invaluable in the long-drawn-out first stage of labor especially where the membranes have ruptured early causing a dry labor. It is a powerful remedy in the treatment of shock and collapse and the excitement of a highly nervous woman is calmed in an extraordinary manner.

The author further states that recovery is hastened and patients who have had pituitrin administered always ask for its repetition. Again he has never had a case of post partum retention of urine nor a severe post partum hæmorrhage following its administration. If slight post partum hæmorrhage supervenes a further dose will control it.

A simple technique for the routine method of administration of pituitrin is given following which is a report of 60 cases demonstrating the efficacy and safety of the drug.  
HARVEY B MATTHEWS

Herron D A: Pituitary Products in Obstetrics  
*St Paul M J* 1914 xvi 237

By Surg Gynec. & Obst.

The author discusses the physiological action of the extracts of the posterior lobe of the pituitary body reviews briefly some of the literature regarding their use and makes some deductions from his own experience with these preparations in a series of 31 deliveries.

In his series of cases where pituitrin was not used the average duration of labor was 10 to 11 hours as against 12 hours and fifteen minutes when it was employed. Fifteen cases which he had thought would be difficult labors if not operative cases terminated spontaneously after the use of from one to two cc injected intramuscularly. He agrees with the generally accepted notion that it should not be given without good dilatation or in primiparæ with rigid perinæ. He is of the opinion that it is more prompt and more reliable than any other oxytocic more powerful than any but ergot, and if used only as indicated harmless to both mother and child.

C D HOLMES.



# GENITO-URINARY SURGERY

## KIDNEY AND URETER

Jump H D Beates Jr H and Babcock, W W :  
Precocious Development of the External  
Genitals Due to Hypernephroma of the Adrenal  
Cortex *Am. J. M. S.* 1914. cxlvii. 548  
By Surg Gynec & Obst.

The authors report a case of the above briefly summarize the literature on the subject and suggest a new theory in explanation of the phenomenon

The subject of the case report a girl began to develop rapidly both physically and mentally when one year old. Hair appeared at this time on the pubes in the axilla and over the legs and trunk in the order named. When she began to talk her voice was pitched much lower than in the normal child and by the time she was seven it was a deep bass. At this time the skin of the face became rough and red from an acne eruption and she developed a beard. A tumor in the right hypochondrium was then first observed although search had previously been made for one. The tumor grew rapidly so that three months after its first appearance the abdomen was greatly distended and dyspnea was marked. The labia were very large and thick. The clitoris was one inch long and half an inch in diameter and notched on the under surface so that it resembled a hypospadiac penis. The patient did not menstruate.

The child died three hours after operation for the removal of the tumor a hypernephroma of the adrenal cortex. At post mortem examination the uterus, ovaries and pituitary body were found normal.

In explanation of the curious overgrowth noted, the authors call attention to the relation between the adrenals and the pituitary body described by Sajous. In regard to treatment they suggest early operation in all cases presenting similar symptoms, as the prognosis without operation or with late operation is absolutely bad. S W MOOREHEAD

Saviozzi V : Study of Perirenal Tumors (Contribution à l'étude des tumeurs pérarénales). *T. med.* 1913 ix 207  
By Journal de Chirurgie

The author describes a case in a woman of 60 who was very pale emaciated and cachectic and whose abdomen had been increasing in size for a year and a half. An irregular swelling which could be felt on the right side was hard and fluctuating in places and extended down to the pelvis and upward to the iliac ribs and occupied both flanks, but was more pronounced in the right. A clinical diagnosis of malignant cystic tumor of the right ovary was made.

Operation was performed under high spinal anesthesia. A median subumbilical incision was made and an enormous soft retroperitoneal tumor discovered which he decided to remove through a lumbar incision. This incision having been made a tumor twice as large as an adult's head was found. The kidney appeared normal and was situated behind the tumor to which it was loosely adherent. The tumor was removed without any considerable hemorrhage and the patient bore the operation well, which speaks favorably for spinal anesthesia.

The tumor was made up of two parts a large multilobular one seemingly made up of adipose tissue and a smaller one apparently fibrous. It weighed 540 kg and was 50 cm in circumference. On section various kinds of tissue were found—fatty fibrous fleshy and muscular. Microscopic examination showed it to be an angiosarcoma tous fibroploma.

The author reviews the cases previously published and comes to the following conclusions. This form of tumor is found especially in women from 35 to 60. Sometimes they develop in the perirenal cellular tissue sometimes as in this case they are encapsulated and are easily removed sometimes they develop in the fibrous capsule and then they are very adherent so that nephrectomy becomes necessary. They may attain a large size weighing from 5 to 30 kilograms. Saviozzi thinks that this case confirms the assumptions of Albarrá Birch, and Hirschfeld that these tumors are derived from the wolffian body. Diagnosis is very difficult. They may be confused with tumors of the kidney spleen and ovary. The prognosis is relatively benign of recent years owing to the progress in surgical technique. He reports 69 operations with 30 per cent mortality. CH VALLANBERG

Bloch O E. Kidney Injuries. *U of S. Cal. & Rev.* 9 4, xviii 69  
By Surg Gynec & Obst.

In order to disprove shock as the most prominent symptom in kidney injuries, the author cites a case of a young man aged 17 who received an injury which was accompanied shortly thereafter by hematuria. Forty-eight hours later owing to a rapid weak pulse and great pain an incision was made over the left kidney which revealed a laceration of the convexity of the kidney about two-thirds of its length.

The second case was that of a man forty five years of age who following the pushing open of a door suffered severe pain in the upper left abdomen. There was no hematuria until a normal. Several days later a swelling developed in the left iliac region which extended to the crest of the ilium and

was palpable Three days later oedema appeared on the left thigh over this area An incision showed this area was filled with blood

The third case was that of a man who had been kicked by a horse in the upper left abdomen

In all three cases the cavities were packed with gauze Bloch believes that on account of penetrating wounds of the kidney being so often associated with trauma to the viscera intraperitoneal operations should be performed H A KRAUS

**Arcelin** One Hundred and Two Radiographic Examinations for Lithiasis of the Kidney and Ureter Verified in Various Ways (Statistique de examens radiographiques pour lithase urétéro-rénale suivie de vérifications diverses) Lyon *med* 9 4 47 By Journal de Chirurgie

Si ce 1906 Arcelin has made 102 examinations for calculus which were verified by operation, spontaneous expulsion of the calculus or autopsy he did not count the numerous cases not operated on or not followed up

As a result of these examinations 92 operations were performed 2 patients having had a double operation there were 7 cases of spontaneous expulsion one of expulsion after catheterization and 4 autopsies In the 102 examinations there were 2 errors of interpretation 1 facial calculus and 1 biliary calculus having been taken for calculi of the kidney In 2 cases the radiographic diagnosis was not confirmed on operation in one case nephrotomy was performed and an attempt was made in vain to find a shadow at the level of the fourth lumbar vertebra in another case several shadows of calculus in the right kidney were not found on nephrotomy but were found at autopsy

To avoid such occurrences as noted above an attempt should be made to localize the calculus by means of a ureteral sound This would show that some shadows located along the urinary tract are not due to calculi There are also some calculi invisible to radiography in the living subject One calculus weighing 3.0 gr was not seen because of lack of mobilization of the kidney while the picture was taken It was composed of phosphate and calcium oxalate and would have been visible with a better technique One calculus of pure uric acid weighing 0.47 gr could not be seen in the living subject but was found on autopsy in the pelvis and 4 pure uric acid calculi of the pelvic ureter remained invisible in the living subject

Thus there were 2 per cent of errors of interpretation 2 per cent of calculi indicated by radiography but not found on operation and 6 per cent of calculi not visible by radiography but found after ward R LEAUCHE

**Krotoszyner M** Early Diagnosis of Renal Tuberculosis. *C. J. St. J. Med.* 9 4 xu 95

By Surg. Gynec. & Obst.

Krotoszyner outlines the methods of making an early diagnosis of renal tuberculosis for he claims

that in limiting the disease to its original focus or to one kidney lies the only hope for a cure by less radical and mutilating means

The failure of recognition lies in the fact that the general practitioner is not on the outlook for it Suspicious symptoms are pollakiuria insidious without palpable cause as gonorrhoea traumatism instrumental infection etc which is running along with or without dysuria and a cloudy microscopically purulent urine which has become chronic Characteristic symptoms are also a slightly red discoloration of the urine or a definite terminal hæmaturia Satisfactory conclusions as regards localization of the focus may be made by a history of distinct attacks of kidney colic or pains located at one of the renal regions at either of the lateral abdominal regions near the crest of the ileum the hip or the os sacrum Occasionally a sensation of chilliness in one lumbar region is complained of also distinct unilateral sensations of pain in one half of the bladder urethra or vagina or in one labium which are either connected with or noticeably independent of micturition at times a sudden and intense bladder tenesmus with evacuation of a few drops of a clear watery urine with chills and consequent sweating

Palpable enlargement of the kidney should be accepted with caution In some cases there are present pressure points in the course of the ureter this symptom is rarely missing in women

LOUIS GROSS

**Pardhy K. M** Nephroptosis; Movable Kidney Floating Kidney Dropped Kidney *P. G.itioner Lond* 19 4 xu 57

By Surg. Gynec. & Obst.

The author makes a report of operations for movable kidney on patients with mental disorders He has performed nephropexy on 415 patients in 396 of which he anchored the kidney on both sides In all he has anchored 811 kidneys He says the majority of patients suffered more or less from neurasthenia mainly or in addition to digestive genito urinary, and local symptoms such as severe headache tachycardia asthma hemicrania etc The author however proposes to deal mostly with patients suffering from mental disorders such as melancholia with or without delusions, insanity and mania He has performed nephropexy on 2 patients of this type His interest was aroused by Suchling's observations along this line

The author then takes up the pathology and attempts to establish the fact that the nervous disorders are due to toxæmia caused by the obstruction to the flow of urine through the ureter He says this toxæmia may be caused in the following ways

1 Deficient excretion therefore retention of some of the waste products of metabolism in the blood stream

2 Interference with the formation of the internal secretion of the kidney

3 Possible formation of a perverted internal secretion

4 As a result of the obstruction of the ureter when it is linked stasis of the urine and back pressure in the pelvis of the ureter calyces and urinary tubules are produced. This is evident as previously stated from the varying degree of hydropneumosis flattening of the pyramids and cystic degeneration met with. Probably this stagnant urine will undergo decomposition and some of the products of decomposition will be absorbed into the general circulation.

According to this condition he justifies the recovery of 19 out of his 25 patients of mental disorders. He emphasizes the great care that should be taken of these patients after operation that they should be under the watchful care of a nurse or should be detained in an asylum for mentally diseased patients. Out of his 25 cases 19 were females and 6 males.

The time required for these patients to obtain a complete cure after nephropexy varies from a few months to a year or more and it is very essential the author states that these patients be properly cared for during that time and their physical and mental welfare carefully looked after as outlined by the usual treatment of mental cases.

The author attempts to refute the idea that nephropexy has little or nothing to do with the recovery of these patients although it requires such a long time for them to recover after the operation.

The author emphasizes the proposition that kidneys should be fixed in as nearly the normal position as possible and he prefers the Billington method of operation. He regards a large number of cases of neurasthenia as caused by movable kidneys and believes that nephropexy properly and efficiently performed prevents auto intoxication and the consequent train of nervous symptoms. He uses the Brödel sutures and the curvilinear incision of Billington extending from the end of the twelfth rib to the edge of the quadratus lumborum and continuing parallel to the ureter. A C STOKES

Nuzum F. Retro-Aortic Left Renal Vein. *J Am Med Ass* 1914 Jan 1238 By Surg. Gynec. & Obst.

Nuzum in a detailed examination of the literature found but 16 citations of the left renal vein lying behind the aorta. To this number he adds 10 from the pathological laboratory of Rush Medical College. The types described vary markedly and were found to drain both normally formed and placed as well as anomalously formed and placed kidneys. The author suggests a probable relationship between the presence of retro-aortic renal veins and the condition known as hypostatic albuminuria in which albumin is detected only while the patient is in a recumbent position or shortly thereafter. J S ENCAVAT

Billington W. The Results of Nephropexy. *Brd J* 1914 941 856 By Surg. Gynec. & Obst.

The author reports having performed nephropexy on over 500 patients in the last nine years in many

cases both kidneys having been operated on. He judges the results of the operation from two standpoints mechanical and therapeutic. To be mechanically successful the operation should result in the permanence of the kidney in the position in which it has been fixed and the absence of unpleasant sequelae such as pain sinus and hernia in the scar. Therapeutically successful cases naturally are those in which the operation is followed by the disappearance of the presenting symptoms.

A review of Billington's cases shows that a very large per cent have been successful mechanically as well as therapeutically. In a recent investigation of 100 consecutive cases where the operation had been of more than one year a standing 60 per cent were cured or greatly benefited 30 per cent were better and 10 per cent were unimproved. In this series 7 were males and 93 were females. Of the women 37 were married and 56 were unmarried. In 57 cases both kidneys were operated on at the same time in 32 cases the right kidney only and in 11 the left. The average age of the patients was 34 and the average duration of symptoms was 5 years. H L SAVOIAN

Caulk, J. R. Incrustations of the Renal Pelvis and Ureter. *S & Gynec & Obs* 104 4 Nov 497 By Surg. Gynec. & Obst.

In the beginning of the article stone formation and calcareous deposits in the genito urinary tract are briefly considered. It is noted that most of the writers on this subject are in accord in the belief that necrosis is the most important feature in such production but the manner in which deposits are laid down in areas of necrosis is still an open question. In the paper four cases of incrustations are reported the first occurred around the renal papilla with a retention cyst of the kidney as a consequence the second case occurred on the posterior wall of the renal pelvis the third in the upper ureter and the fourth in the juxta-eccal ureter in other words such formations may occur in any part of the tract. The deposits in all four cases were evidently calcium salts. The two pelvic cases showed inflammatory changes as an etiological factor in the ureteral cases, not coming to operation the pathological lesion could not be determined. There was nothing of importance in the symptomatology except in case three. In this case the pain was paroxysmal acute and entirely epigastric.

The chief feature of the author's paper is the diagnostic complex which should enable one to differentiate an incrustation along the ureter from a calculus as well as a sandy impaction. The following are the four cardinal points:

(a) Faint X-ray shadow (b) the passage of the egg shell like material following the manipulation with the ureter catheter (c) the passage of the catheter through the obstruction and relief of the patient of symptoms the X-ray shadow still persisting and (d) finally the gradual disappearance of the shadow by use of the ureter catheter.

Treatment in such cases depends on their location. Those around the papillae or within the renal pelvis should be removed by nephrotomy. The author believes that pyelotomy will not provide sufficient exposure to insure the complete removal of all the calcareous material. Incrustation along the ureter should be removed by means of the ureter catheter if possible. Open operations are liable to lead to secondary stricture necessitating later nephrectomy.

Sweet J E and Stewart L F. The Ascending Infection of the Kidney. *S J Gynec & Obst* 9 4 xvii, 460. By Surg Gynec & Obst

The authors present a review of the literature of the lymphatic apparatus of the kidney, ureter and bladder which shows that there exists an extensive lymph system which freely anastomoses so that the bladder is in direct lymphatic connection with the kidney through the lymph channels of the ureter. They conclude that infection travels through these channels and not through the blood vessels since the veins of the bladder and ureter for the greater part open into the general venous system not into the venous system of the kidney that infection proceeds upward through these lymphatics and not through the lumen of the ureter is further shown by experimental evidence. If the lumen of the ureter be open to infection the infectious process is traceable in the lymphatic system not along the mucosa of the ureter. If the lumen be closed to infection the process extends to the kidney in the usual way. If the lumen be open to infection but the lymphatics not in contact with virulent infection as when the ureter is passed through the pancreatic duct there is no ascending infection. If the lumen be open but the continuity of the lymphatics be interrupted in section does not ascend. Finally if the kidney pelvis be directly connected with the gut the general infection characteristic of an ascending infection of the kidney does not occur.

The practical surgeon must bear this lymphatic system in mind in dealing with any infectious process in the pelvis or lower abdomen and in the presence of a kidney involvement must look for a possible primary source outside the kidney. The suggestion is offered that ulcerations accompanying a cystitis should be locally treated.

Von Hofman E.: Dangers of Pyelography (Sur les dangers de la pyélographie). *Fol* of 9 4, viii 393. By Journal de Chirurgie

Pyelography is a method of kidney examination which consists in injecting a 1 per cent solution of collargol or some other substance opaque to the X rays through a ureteral sound so as to fill the pelvis and the calyces. A radiograph is then taken and an image of the excretory passages obtained. Thus renal retention or an malposition which could only be suspected clinically can be demonstrated. But the method is not without danger. Von Hofman describes the two following cases.

Pyelography was performed on a young girl of 15 with a left hydronephrosis. Four days later she died of peritonitis. Autopsy showed that the pocket of hydronephrosis filled with collargol had ruptured. As the kidney was adherent to the descending colon rupture took place into the posterior cavity of the omentum. From there through Winslow's foramen the collargol was distributed into the peritoneal cavity. On histological examination collargol was found in the uriniferous tubules and also at certain points in the glomeruli. Through the ruptured uriniferous tubules the collargol had passed into the neighboring tissue where it had produced necrosis.

In a second case of pyonephrosis pyelography was performed three days before operation. The collargol had penetrated the interstitial tissue though the fissure through which it had passed could not be found. Here too the collargol had produced foci of necrosis. Therefore pyelography by Voelcker and Lichtenberg's method is not without danger. As in all methods of examination the technique should be found which will give the maximum of benefit and a minimum of risk. The author believes that Legueu and Papin's instrumentation and technique will aid in avoiding such accidents as those described.

E JEAN RAU

Barringer B S. Ureterocele and Ureteral Stone. *T Am Ass G U Surgeons* Stockbridge 9 4 31 y. By Surg Gynec & Obst.

The author believes that kidney or ureteral stone is at times secondary to ureterocele and cites a case in which there were bilateral ureteroceles in one of which a stone was caught. By means of the operative cystoscope the margin of the ureteral orifice was removed and the stone passed into the bladder and thence out. This simple operation cures the ureterocele and removes the stone at the same time.

Whitehead G. Extraperitoneal Ureterolithotomy through a Median Suprapubic Incision. *Lancet* Lond 914 clxxvi 8.

By Surg Gynec & Obst

A youth of 6 was admitted to the hospital for radical cure of right inguinal hernia. He had had an external urethrotomy at 7 years of age for removal of an impacted stone in the urethra, at 11 a suprapubic cystotomy for vesical calculus and a second time for vesical calculus at 15 and at 16 radical cure of left inguinal hernia.

Ten days after the operation for radical cure of right inguinal hernia he was seized with a sudden attack of pain in the left groin. X ray examination showed a calculus the size of a sparrow's egg impacted in the lower end of the left ureter. A median suprapubic incision was made under spinal anesthesia. The calculus could be palpated with a finger in the bladder near the left ureteric orifice but the procedure pushed it upward in the ureter. By free retraction of the left rectus muscle and extraperitoneal dissection the left ureter was ex-

posed at the pelvic brim. A sling of stout silk was passed around it and held while with a finger in the bladder the stone was pushed upward against the silk sling and a second loop of silk was passed around the ureter below it.

The stone was removed through a longitudinal incision and the opening closed with fine catgut. The bladder was sutured and the suprapubic wound closed with a slender tube put down to the incision in the ureter. A soft rubber catheter was tied in for 48 hours when both the catheter and drainage tube were removed. Recovery was uneventful the wound healing by first intention.

The bladder was opened by a median suprapubic incision because it was suspected that the stone would be found cysted close to the ureteric orifice and would be easily removed by the transvesical route. The excellent access to the pelvic ureter by extraperitoneal dissection through the same incision suggests that in similar cases the median incision might be used and the stone removed from the ureter after pushing it back to the pelvic brim without opening the bladder. **H. G. HAMER**

### BLADDER URETHRA AND PENIS

**Coudray J:** Primary lithiasis of the Bladder in Children and Adults up to 48 among the Musulmans of North Africa (Contribution à l'étude de la lithiase vésicale primitive de l'enfant et de l'adulte jusqu'à 48 ans chez les musulmans du Nord). *J. de med.* 1914, v. 71. *By Journal de Chirurgie*

In 10 years Coudray has seen 48 cases of calculus of the bladder among the Musulmans, 40 of which were in adults from 15 to 40 and 50 in children under 15. During the same time he had only one case of kidney calculus. He believes that the nature of their diet which is largely vegetable and lacking in nitrogen and the water which contains calcium and magnesium, are important factors in pathogenesis. Incontinence of urine was unusual in all cases there was also prolapse of the rectum. Because of the late stage at which the patients came for treatment and the frequency of renal infection cystostomy which places the bladder at rest and allows it to be drained and disinfected was indicated in preference to lithotomy. **J. T. VRO**

**Edmunds, A:** Ectopia of the Bladder. *Practitioner*. Lond. 1914, vol. 501. *By Surg. Gynec. & Obst.*

Ectopia of the bladder is a deformity which according to Neudörfer occurs once in 50,000 births in the proportion of eight boys to one girl. Smeed the resident medical officer at Queen Charlotte's Hospital reports only 3 cases out of 25,000 births for a period of seven years in that institution. The author gives the details of a case which came under his personal supervision.

The patient was a girl aged 12 who had been sent home from South America in the hope that some thing could be done for her in England. Her condition

was extremely miserable. The mucous membrane of the bladder was completely exposed projecting forwards as a deep red ovoid swelling, but was in fairly good condition that there were no ulcers or incrustations upon it. The skin around was cicatricial and covered with scales of hardened mucopurulent discharge at the lower part of the bladder the two ureters could be seen partly covered up by swollen mucous membrane. The urine escaped naturally through both of them.

There was a fullness in each groin which ended toward the middle line in a rounded eminence bearing a few scattered hairs the two together forming a sort of vulva. On separating these two curved fleshy prominences were seen, representing the nymphæ and the split clitoris and between these was a small triangular area of mucous membrane. This bore several transverse ridges and was smooth lighter in color and healthier looking than the bladder differing very little from the normal vaginal wall of which it was probably the representative. There was no indication of a cervix. The anus as normal. On either side just beneath the two hairy patches could be felt the pointed ends of the divided symphysis. The child walked badly, less perhaps on account of her split pelvis than of the exposed bladder wall and the tenderness of the skin around even contact with her clothes causing her pain. Her general condition was poor and the benefits of the operation as regards her general health were astonishing. There was nothing in the appearance of the rest of her body or in her general mental condition to suggest any sexual abnormality beyond the physical deformity she was a normal child of twelve.

She was kept in bed for a week after admission, in order to get her accustomed to her surroundings and also to allow the parts to be cleansed. Under a general anæsthetic, the area around the bladder was disinfected and a fine catheter passed into each ureter so as to define its course and enable it to be felt through the surrounding tissues during the later stages of the operation. An incision was made through the mucocutaneous margin around the upper part of the bladder. The bladder wall was then carefully dissected up from the peritoneum a procedure which in this particular case presented no difficulty although in some cases it has been found to be difficult.

If however it is proposed to do a transperitoneal operation a buttonhole in the peritoneum is not a matter of any vital importance. Although it is a distinct advantage to retain it intact. If this can be done the peritoneum forms a flap which can be utilized for the purpose of shutting off a general peritoneal cavity without producing an unnecessary amount of adhesions between the coils of the small intestine. When about half the bladder had been dissected up the peritoneum was deliberately opened and the testes reflexly packed out of the way the finger of the left hand was then introduced to the wound beneath the bladder wall are being

taken not to injure the ureter the position of which was rendered apparent by the catheter. The incision which had been commenced above was then continued around the whole periphery of the bladder until this had been completely detached—no cutting being done until it was perfectly certain that the ureter was well out of the way. It should be noticed that in these cases the relationship of the parts differs from the normal the ureteric opening is to all intents and purposes on the anterior abdominal wall and hence the ureters are much more superficial than usual. In this case they lay along the brim of the true pelvis as far forward as the free anterior ends of the bone.

When the bladder had been detached all around a certain amount of the wall was clipped away, until a thick broad fusiform area was left attached to the pelvis by a broad stalk of tissue containing the ureters. This was separated from the pelvic wall just sufficiently to allow of its being turned over so that the mucous membrane looked towards the sacrum. This part of the operation must be carefully done its object being to detach the contents of the pelvis from the pelvic wall as little as possible. It is certainly possible to retain the vascularity of the stump of the bladder and therefore probable that provided sufficient care is taken the nervous connections may be retained to a certain degree also. A great amount of separation is not required. It is not so much a question of carrying back the bladder to the bowel as of bringing a mobile portion of the bowel forward to the bladder. It is just this point in which the transperitoneal method has its great advantage allowing the surgeon to employ the mobile peritoneum-covered pelvic colon rather than the more fixed retroperitoneal rectum.

In the present case the part of the bladder which was anastomosed was uncovered by peritoneum except for a small area about half an inch square. Here the peritoneum was retained in position but proved of no particular service in the anastomosis. At this stage of the operation the ureteral stalk was separated into two so that the wall of the colon could be stitched over the implanted area of the bladder between the two ureters but this proved impracticable and unnecessary and therefore might better have been omitted. The next stage was to perform the anastomosis proper. This was carried out on the lines of a gastro-enterostomy. The pelvic colon was brought out and clamped so as to lie transversely across the wound packing being arranged around it to catch any contents that might escape. An incision was then made through the muscular coat of the bowel exposing but not cutting through the mucous membrane. The lower edge of this incision was then carefully stitched to the muscular part of the stump of the bladder. When this row of sutures was complete the bowel was opened the catheters were removed, and the mucous membrane of the bladder sewn to that of the colon the anastomosis was then completed by suture of the bladder wall to the upper margin of

the incision through the colon. The peritoneal flap which was produced by the detachment of the upper (umbilical) segment of the bladder was then tucked back over the small intestine and behind the anastomosis and a drainage tube was inserted down to the bottom of Douglas's pouch. Two stout silk worm-gut sutures were then passed through the fibrous margins of the opening in the abdominal wall and left loose. The wound was then packed with cyanide gauze.

The patient bore the operation well and although she was far from robust at no time during the course of the case was there any cause for anxiety. There was no leakage from the anastomosis and the tube in Douglas's pouch was removed a few days later and left out. The wound from its nature could not be considered aseptic but such free drainage had been provided that there were no constitutional symptoms of sepsis. The temperature for the first fortnight never rose above 99.4 and there was no sloughing of the wound, which granulated well but slowly. The anastomosis did not leak in the least and receded into the depths of the wound leaving a cavity which ultimately filled up. Six days after the operation when the risk of septic complications seemed to be past gas was administered and the two loose sutures were tied thus reducing the size of the wound very considerably.

The subsequent progress of the wound was uneventful and the patient was able to leave the hospital seven weeks after the operation with one or two areas about 1 mm square still unhealed. It was unfortunate that she could not be detained for further observation but the nature of her parents' employment necessitated their return to South America and her general condition was so good that it was not considered justifiable to insist upon her staying in London. Her health and comfort improved from the day of the operation although she still showed an instinctive terror of being touched and it was some time before she could forget the soreness and tenderness. The small area of mucous membrane representing the vagina remained sensitive although not tender and the author thinks it would have been better to have removed it entirely since at the operation no uterus seemed to be present. Control was perfect from the first a mixture of faeces and urine passing every three or four hours.

At first she was disturbed through the night but she soon accommodated herself to her new conditions and remained comfortable nearly every night. She had a slight attack of pyrexia a month after the operation but nothing was found in the urine to account for it, although this examination was of course complicated by the presence of faeces. Towards the end of her stay in the hospital she also had some slight irregularity in temperature but this was accompanied by no symptoms which indicated it was due to anything more than a cold.

As these cases are very rare Edmunds offers the following suggestions

1 That plastic operations designed merely to reconstruct the bladder are unsatisfactory since at the very best they only afford partial relief and that transplantation of the ureters is preferable.

2 That transplantation of the base of the bladder is better than the separate transplantation of the ureters because it is easier to perform and on theoretical grounds is less likely to lead to an ascending infection.

3 That this is done better by an intraperitoneal than by an extraperitoneal route inasmuch as it is possible to perform the operation with less interference with the vascular supply of the bladder stump and to utilize a mobile portion of the bowel.

4 That inasmuch as most of these cases die of pelvic cellulitis the wound should be left freely open. A hernia may be developed, but this can be dealt with later by an aseptic operation or may be controlled efficiently with an apparatus.

H A MOORE.

David V C: A Bacteriological Study of Fifty Cases of Non Tuberculous Diseases of the Bladder and Kidney. *Surg Gynec & Obst* 1914 xviii 43 By Surg Gynec. & Obst.

The cases studied include 27 cases of chronic cystitis; 2 of pyonephrosis; 10 urinary calculi and 2 vesical tumors. Colon bacilli and allied organisms were present in 60 per cent of the cases but in pure culture in only 30 per cent. Staphylococci were present in 35 per cent of the cases and no two strains were identical in cultural characteristics. One case presented the unusual combination of pseudodiphtheria bacillus streptococcus and pneumococcus. Anaerobic cultures were made in all cases and 14 anaerobes were isolated in ten cases, 4 times in pure culture and twice as the prevailing organism.

An anaerobic black pigmented gram negative bacillus was isolated in 4 cases. It grew only on blood media and in most respects corresponded to the schwarzen farbstoffbildender bacillus described by Heyde which he isolated from the appendix.

Anaerobic gram negative influenza like bacilli were isolated in 3 cases twice in pure culture. These bacilli grew only on blood media with a scarcely visible growth and were non hemolytic. Injected into the renal pelvis of rabbits they caused death in 24 hours but no macroscopic evidence of pyelitis or cystitis was present.

Other anaerobes were isolated as follows: Staphylococcus parvulus a hitherto undescribed gram-negative coccus bacillus funduliformis and gram-negative staphylococcus.

Heitz Boyer M: Endoscopic Treatment of Tuberculosis of the Bladder by High Frequency Currents (Traitement endoscopique de la tuberculose vésicale par les courants de haute fréquence). *J & vol* 19 4 35 By Journal de Chirurgie.

The author has previously described the use of the high frequency current in the form of spark

discharges for the treatment of tumors of the bladder and is now applying it to the treatment of tubercular lesions of the bladder particularly to tubercular ulcerations persisting after nephrectomy. In cases where the tubercular ulceration has already thinned the bladder wall and perforation is to be feared the spark discharge is superior to scarification by electrocoagulation. It is applied to the ulceration and an area of at least 1 cm around it.

The operation may be very painful and necessitate local or even general anesthesia. There is a violent reaction in the area treated with the production of an exuberant dirty white membrane which recalls the appearance of certain gangrenous villous tumors in process of elimination. This membrane is discharged little by little at the same time that a new epithelium is forming to cover the denuded surface. Complete cicatrization requires four weeks on an average the urine clears up and gradually the pain disappears. The same treatment may be applied to persistent granulations with or without abscess formation.

J TASTOV

Hyman A.: The Normal Bladder and Its Sphincters and the Changes following Suprapubic Prostatectomy. *A Surg Phila*, 914 hr 544 By Surg Gynec. & Obst.

Incontinence of urine following prostatectomy is encountered infrequently very rarely after a suprapubic enucleation, but is more often met with after the perineal operation. The cause of this condition has not been definitely determined. The object of this study is to inquire into the mechanism of urination following suprapubic prostatectomy and to note the changes in the topography of the bladder resulting from this operation. Although individual opinions vary it appears to the author that Leedham and Greene present the best summary of the standard anatomists. They describe three constructor muscles the smooth muscle involuntary internal vesical sphincter and the striated voluntary ry compressor urethrae but it is well recognized that but two of these muscles are of importance in the act of micturition.

The contour of the normal bladder has long been the subject of much discussion. In 1903 a new method of studying the form of the bladder was devised by Volcker and Lichtenberg. They employed collargol injections combined with radiography and as a result of their work concluded that the normal bladder when distended is invariably broader above than below and is never round. Subsequently Leedham and Greene using the same technique reported that the radiographs obtained showed the bladder to be oval in shape. The method of Volcker and Lichtenberg—collargol injections combined with radiography—offered the best physiological method of studying this much discussed question and conclusions reached by its application appear to Hyman to definitely solve this problem. It seems that the observations of the author on the normal bladder are in the main

in accordance with the work of Volcker and Lichtenberg. He began his radiographic studies two years ago. In the beginning three different positions were tried: the ventrodorsal—patient lying flat on back; the dorsoventral—patient on abdomen; and the lateral. The lateral views were very unsatisfactory owing to the density of the muscular and bony structures of the pelvis. The dorsoventral and ventrodorsal gave practically the same results and the latter the ventrodorsal position because more convenient was adopted as a routine. The position of the X-ray tube is of considerable importance. The earlier radiographs were taken with the tube placed posterior and obliquely to a vertical plane passing through the symphysis pubis. It was found, however, that this position failed to give a good view of the outlet of the bladder. Subsequently therefore the tube was placed so that its focus was at a right angle to the plate the rays striking the body just above the symphysis. A compression blend was used moderate compression being applied however so as not to disturb the bladder. The medium used was a 5 per cent solution of collargol which in the large majority of cases was found to be non-irritating. The solution was introduced through a catheter which was then withdrawn.

Twelve radiographic exposures of normal bladders were made and as the main object was the study of the sphincter region the bladders were fully distended.

The shape of the normal bladder was found to be variable although the type most frequently encountered was that showing a broad upper portion narrowing down toward the outlet. In the radiographs the urethra was invariably found to be sharply demarcated from the bladder thus demonstrating that the internal vesical sphincter is the muscle that retains fluid in the distended bladder. The position of the internal sphincter was either on a level with the upper border of the symphysis pubis or midway between the upper and lower borders.

The following conclusions are drawn by the author:

1. The internal vesical sphincter is the true sphincter of the normal bladder and of the bladder in prostatic enlargement.

2. The external vesical sphincter compressor urethrae is the functioning sphincter after suprapubic prostatectomy in the large majority of cases.

H A MOORE

Packard H. Emerson of Bladder. *A S S Philadelphia* 944 555 By Surg Gynec & Obst.

The author reports the case of a young woman, 17 years old who was the subject of a criminal assault when four years old and who suffered at that time extensive pelvic lacerations. When she presented herself to the author she had complete prolapse of the uterus and eversion of the bladder. An X-ray photograph showed an entire absence of the pubic arch. That this was not congenital was

proved by the fact the patient was normal as a child before the assault. The entire bladder wall was dissected out and the ureters implanted into the vagina and then through an abdominal incision fixation of the uterus was effected by entangling the fundus with the recti muscles. This was followed by a good recovery and relief of the many distressing symptoms with the exception of urinary incontinence.

H SAVROAN

Bangs, L. B.: Cicatrix of Bladder Relieved by Fulguration. *Med Rec* 1914, LXXV 69.

By Surg Gynec & Obst.

The author reported an interesting case of obstruction following suprapubic prostatectomy which was relieved by fulguration. About eight months following operation the case was referred for examination. The patient voided turbid urine in a dripping manner. Five ounces of purulent residual urine were obtained. Cystoscopy revealed a transverse cicatricial band with bulging lateral folds just within the internal orifice. As operation was refused fulguration was advised. Four applications were made forming a groove through the middle of the band and reducing the residual urine to six drams. Relief was felt after the second application.

C D PICKRELL

O'Neill R. F.: A Case of Incrusted Cystitis Showing End-Result. *T Am Ass G U Surgeons* Stockbridge, 94 N Y. By Surg Gynec & Obst.

The patient was a woman of 29 who entered the hospital in 1896 for the relief of hematuria vesical tenesmus and urinary pain and frequency of six months duration. The trouble began about a month after delivery. She had passed clots with gravel.

Examination of the bladder under ether showed a large sloughing area on the trigone and other smaller ones. Calcareous patches could be felt with the finger. The areas were curetted. Considerable improvement followed the operation.

She was next seen in 1914, eighteen years after operation when she came to the hospital for abdominal symptoms. This attack having no connection with her genito-urinary tract. A cystoscopy was made at that time however the note being as follows: Bladder shows evidence of inflammatory process in the past. Mucosa thickened in places. The mucous membrane on the whole is paler than normal. Ureteric orifices normally placed and normal in appearance. Catheters passed easily to each kidney. Normal looking urine appeared from each side. The examination of the sediment showed no pus from either kidney and no growth on culture. There is no evidence of an inflammatory condition of either kidney.

The patient states that following her discharge from the hospital in 1896 she suffered from a recurrence of her bladder symptoms with the discharge of blood and calcareous masses for a period of four years at times the attacks being nearly as



bad as that at the time she entered the hospital. The condition gradually improved and disappeared under local treatment and she has had no treatment for the past ten years. At present there is neither pain nor nocturia.

From the clinical history and operative findings this case is evidently one of incrustated cystitis the point of interest being that a severe process could persist in the bladder for so long a time terminate in recovery and leave little or no permanent disability. Also that during this time infection of the kidneys did not occur at least to no permanent degree either by way of the ureters or the lymphatics.

Squier J B Rectovesical Echinococcus Cyst  
A Surg Phila 9 4 lx 396  
By Surg Gynec. & Obst.

The author had a case which came to him with a diagnosis of enormous vesical calculus. The chief complaints were frequency of urination intense pain in the penis and a tumor in the hypogastrium. The tumor appeared to be a greatly distended bladder. Cystoscopy was impossible. There were six ounces of residual urine. Cystotomy showed multiple echinococcus cysts coming from the bladder. The bladder was drained. At a second operation another cyst which was found adherent to the under surface of the liver was removed. At a third operation the bladder was more freely opened. In the region of the trigone there was an opening as large as a half dollar which communicated with what was evidently the mother cyst, between the rectum and the bladder. A perineal opening was made into this cyst and the cyst cauterized with carbolic acid. The suprapubic bladder opening was closed and the recovery was uneventful.

B S BARRINGER.

Judd E. S.: Non Papillary Benign Tumors of the Bladder. *J La ed* 9 4 xxx v 83.  
By Surg Gynec. & Obst.

The author reports two cases of non papillary benign tumors of the bladder. Both patients had all the characteristic symptoms of bladder tumor. The author states however and tries to establish the fact as a differential diagnostic point that the hemorrhage in these cases was sharper and more severe than is usual in papillary bladder tumors. Both cases were perated upon suprapubically. The statistical frequency of the tumors was one and two-tenths per cent. Microscopically they were composed of smooth muscle fibers and fibrous connective tissue.

V D LESPIGNE.

Gehrels, F. The Endovesical Treatment of Papillomata of the Bladder by High Frequency Currents. *Austral M Gaz*, 9 4 xxx 292.  
By Surg Gynec. & Obst.

The author describes the principle of Beer's treatment as the application of the high frequency current or rather the Oudin current in the interior of the bladder directly to the papilloma. The

difference in Beer's treatment from the ordinary fulguration treatment consists in the fact that the electrode is applied directly to the papilloma and under water. Beer avoids producing sparks and effects coagulation of the tissue but so cauterization. By applying a current of varying strength for a greater or less period of time a coagulation and necrosis of the papilloma is effected, and after some days the necrotic parts are cast off. The treatment is done mostly in several sessions, always under control of the eye.

The author after describing Beer's method with the high frequency machine and Oudin resonator, and the method with the diathermic machine used chiefly by German surgeons describes in detail his own methods as follows. The diathermic apparatus is connected with the current collector. The anode is connected with a 10 to 6 inch indifferent electrode that will be applied to the abdomen above the symphysis. The cathode is connected to the high frequency sound that has the shape of a ureteral catheter of No. T F with a platinum tip. He regulates the strength of the current by trying the sound on a piece of raw meat. For introducing the sound an ordinary indirect catheterizing cystoscope is used. The urethra and bladder of the patient are anesthetized by 5 dr of a 2 per cent solution of alypin adding 10 drops suprarenin, applied for 5 to 10 minutes. Then the bladder is washed with oxyganate of mercury 1:5000, and filled with 5 oz of distilled water. After introduction of the high frequency sound it is led towards the growth and between its villous processes.

The current is turned on for 15 to 30 seconds and this procedure repeated on different spots until the whole surface of the growth appears necrotic. The time of application is shortened the nearer the pedicle is approached in order to avoid injuring the bladder wall. The time required for one session is three to five minutes. The treatment is repeated every eight days and continued until the whole growth is necrotic. The eschars are allowed to fall off by themselves. Where only the pedicle is left it is treated in the same manner. Where the current is applied the tissue becomes white. Sparks are rarely seen. Only a slight formation of gas takes place. Pain is experienced only if the bladder wall is touched and this is a warning sign. Should bleeding occur the application of the current will stop it. The necrotic parts are mostly cast off in one week. Rest, bland diet and urotropine are recommended during treatment. During the first month the bladder is washed with a 2 to 5 per cent solution of resorcin every two weeks to prevent recurrence.

The advantages of this endovesical treatment are summarized by the author as follows. It is easily done and hospitalization is not necessary. It is painless, and under control of the eye. Nearly all papillomata can be attacked. There is the important hemostatic effect. The dangers are as naught. It has high advantage over cystotomy and resection of the bladder. The mortality in

cystotomy is 2 to 10 per cent and repeated operations for recurrences may be necessary. The leading surgeons of Europe and America are using this treatment and report favorably.

The indications for treatment are tabulated as

- 1 Papillomata clinically benign not exceeding the size of a walnut
- 2 Recurrences of papillomata
- 3 Hemorrhages of malignant growths of the bladder

The article closes with a differential diagnosis between benign and malignant forms of bladder tumors.

H J POLKEY

Viko, E. Surgical Treatment of Urethrorrectal Fistulae. *J Am M Ass* 94 14 1903

By Surg. Gynec & Obst.

Viko says that present methods of operation for urethrorrectal fistulae result successfully in only 25 per cent of cases. The operation described by him consists in dissecting down to and around the fistulous tract between the rectum and urethra. The tract is tied like a blood vessel close to the rectum and divided. A purse string suture is then placed around the fistula close to the urethra, the ends of the suture being left long. Several flaps are then dissected loose alternately on each side of the ligated urethral end and stitched in place one on top of the other each suture line being located at a different plane. The long ends of the urethral tie are drawn through the center of the first flap and tied before the flap is stitched into place. The rectal tie is buried by two or three pleats of rectal wall. After building up this comparatively thick layer of tissue between the urethra and the rectum the latter is partly twisted and a sound part sutured to the layers of urethral flaps. The author claims that this method of repair of urethrorrectal fistulae is very satisfactory but gives no data as to the number of cases on which it has been performed or the percentage of cure.

J D BAER

### GENITAL ORGANS

Grimm, C E. A Case of Double Cryptorchidism. *W V M J* 19 4 1930

By Surg. Gynec & Obst.

The author describes a case of bilateral cryptorchidism with surgical technique. He advises operation before puberty to minimize dangers of hernia and defective or malignant development. On the left side he employed the usual technique (Bevan) of incision and exposure and found the testis had slipped into a blind pouch through the roof of the canal affording a cord of sufficient length to allow the organ to be placed in the scrotum and retained there by merely contracting the neck of the scrotum by a purse string suture. On the right side the testis was found at the internal ring necessitating section of all structures except the vas artery to vas and permatoc artery

to afford a cord of sufficient length. Primary union resulted with a retraction of the right testis only and that only as far as the external ring.

Grimm is loath to cut spermatic arteries because of experimental evidence adduced by Moschowitz showing degenerative changes in the testes— with resected spermatic arteries. He approves of Davison's technique which makes it possible without section of the spermatic artery to secure greater cord length by dissection of these structures out of the abdominal wall freeing enough of the same to insure adequate length. The epigastric artery having been protected by a double ligature and the posterior wall of the canal having been incised the vas is located and freed at the internal margin of the wound and the spermatic artery located and freed along the external edge of the cut transversalis fascia.

The testis is sutured to the bottom of the sac and the suture passed externally and a fast loop made to afford a fastening for traction from without. To this suture loop is fastened a thin rubber band the distal end of which is fixed by adhesive plaster to the thigh giving the proper amount of traction. It is of course necessary to immobilize the thigh by plaster or starch dressing. Closure of the wound follows the usual principles of herniotomy.

LOUIS L. TENBROECK.

Lillenthal, H.: Prostatectomy in a General Surgical Practice. *Ann S & G Phila* 94 14 1933

By Surg. Gynec & Obst.

Basing his conclusions on the records of 80 prostatectomies the author presents a strong case in favor of the two-stage operation and gives a comprehensive chart summary of all the cases with histories of 13 illustrative cases. Because of its many advantages he considers the suprapubic route the wisest especially for the general surgeon and follows this procedure in practically all of his cases. He contends that suprapubic cystotomy should be the first step even though it may then appear best to proceed with enucleation from below. He does not perform cystoscopy as a general rule because he says it has some dangers and he can get a better view of the bladder during operation. Before the suprapubic opening closes he inserts the cystoscope for bits of slough or loose tissue which might form nuclei for subsequent stone. Three times he has observed calculi formation after prostatectomy.

He performs none of the renal function tests because he considers that cystotomy is fully indicated even with poor renal function. The quantity of urine however is carefully noted.

Most of the patients were badly nourished feeble old men average age 64 years with hardened arteries and diseased kidneys. The series is not one of selected cases. No one who applied for relief was refused the opportunity which surgery might hold out.

The first step of Lillenthal's operation consists in

cutting down to the space of Retzius under local anesthesia the bladder is distended with air and with two traction sutures through the bladder wall the bladder is incised. The traction sutures on each side of the wound in the bladder wall are then made fast to the spongerolls and a large tube placed in the bladder enucleation. The second step is performed 8 or 9 days later under general anesthesia with no instrument in the urethra and the finger of an assistant in the rectum pushing up the prostate.

In reviewing results in his non malignant prostatectomies the author finds that in 37 cases in which the one-stage method was followed 7 or 16 per cent died while in 33 two stage prostatectomies only 2 or 6 per cent died. The ages averaged the same.

Among the 80 cases carcinoma was found in 7 and vesical calculi in 13. As to post-operative complications he had 7 cases of epididymitis 1 case of acute septic testicle 5 cases of hemorrhage 3 of pneumonia and 3 of uræmia.

C. R. O'CONNOR

**Stevens A. R.** Treatment of Certain Cases of Prostatic Obstruction by Cauterization by the High Frequency Current. *Am. J. Surg.* 1914 21: 93. By S. R. Gynec. & Obst.

In some cases it is possible to destroy prostatic tissue with the high frequency current the obstruction being thus removed. The author has successfully treated 4 cases and attempted to treat 3 more but the latter patients complained so bitterly after instrumental manipulation that the treatment was discontinued after the first sitting. Intolerance to the cystoscope after good local anesthesia may become a contraindication and turn the tide in favor of operation.

The method is not suitable for large hypertrophies, but is good when a comparatively small portion of prostatic tissue causes a marked obstruction. It may also afford partial relief in the other types of hypertrophy when operation is positively refused. With the Oudin type of current a single cauterization is not deep and progress is much slower in destroying prostatic tissue than it would be with a papilloma of the bladder. Three cases are reported.

FAXTON E. GARDNER

**Col. A. P.** Kidney Function Estimation in Preparation of Patients for Prostatectomy. *Lancet* 1914 2: 466. By S. R. Gynec. & Obst.

The author emphasizes the value and explains the use of functional tests: estimation of surgical risks in the preparation of patients for prostatectomy. Two tests are considered capable of giving all the necessary information: an estimation of the blood urea and repeated phthalein tests. The former is a test of retention and is of value only when the phthalein test is very low so that in most cases only the one test is needed.

The interpretation of the phthalein test depends

upon comparative readings in each case. A marked decrease in the excretion of the dye invariably means severe derangement and repeated tests will demonstrate whether this is permanent or temporary. Lowering of kidney function from prolonged back pressure ascending infections etc. invariably improves upon preliminary treatment of drainage by catheter or suprapubic incision, whereas the reduction due to a chronic nephritis shows little if any improvement. In the latter case the retention of urea in the blood is of considerable significance of an impending uræmia.

A careful clinical study of the case particularly with respect to acute renal infections is of equal importance in estimating a surgical risk. No case with an acute pyelonephritis should be submitted to operation even in the presence of a high phthalein. The author gives a very good review of the methods in use in preliminary treatment and in the estimation of the risk of operation.

FRANK H. MEYER

**Pilcher P. M.** Transvesical Prostatectomy in Two Stages. *Am. J. Surg.* Phila. 1914 104: 300. By Surg. Gynec. & Obst.

In this article which is the result of the author's personal experience he states that his study of the pathology of chronic prostatism leads him to disagree with the theory of Tandler and Zuckerkandl that prostatic hypertrophy is always hypertrophy of the anatomical middle lobe. He believes that the two lateral lobes and the median lobe are usually involved and that inasmuch as the obstruction is at the neck of the bladder and projects into the bladder the natural cause of approach is the transvesical route. He advocated the technique of a two-stage transvesical operation in every instance for the relief of benign hypertrophy of the prostate for the reason that as a result of relief of the distention of the bladder three phases of kidney secretion are demonstrable and during the second phase lasting from a few days to a number of weeks a period of danger occurs during which no surgical attack should be undertaken.

The author performs a preliminary cystostomy for the reason that following suprapubic cystostomy the patient is out of bed in twenty-four hours the urinary output from the bladder is completely controlled by an apparatus which he illustrates there is no unpleasantness or trauma due to the passage of the catheter through the urethra and the operation of transvesical prostatectomy is already half completed.

The author reports 28 successful cases in which he has followed this use of treatment every case resulting in the control of urine by the patient and his ability to empty the bladder without the use of a catheter. It does not apply to this technique to known or suspected cases of carcinoma of the prostate.

H. L. SANDRO

# SURGERY OF THE EYE AND EAR

## EYE

**Credé-Horder Prevention of Gonorrhoeal Ophthalmia** (Warum konnte die Blennorrhoe nicht abnehmen) *Zentralbl f Gynäk* 1914 xxxviii, 116  
By Zentralbl f d ges Gynäk u Geburthsh d Grenzgeb

The author directed a series of questions to lying in hospitals and university gynecological clinics to determine the following points

1 Whether there is any permanent injury to the child's eyes from the use of a prophylactic solution for ophthalmia The answer in all cases was no

2 What prophylactic is the best? The answer was generally silver nitrate sometimes silver acetate and sophol

3 Whether it is advisable to make prophylactic treatment compulsory and punish neglect of it by law Among 51 gynecologists 25 favored compulsory prophylaxis 20 were directly opposed to it and 6 undecided Among 20 directors of university clinics 8 were in favor of it 10 opposed and 2 undecided while all of them were in favor of prophylaxis

Among 110 ophthalmologists 79 favored compulsory carry out of Credé's prophylaxis 15 were undecided of 17 professors of ophthalmology 13 were unconditionally in favor of it 2 conditionally in favor of it, and only 2 opposed to it While the morbidity is growing constantly less in hospitals outside of them large numbers of infants still have gonorrhoeal ophthalmia so that new methods of prophylaxis must be established MORALLER

**Elliot R H Henderson E E Fleming, A and Others** Discussion on the Use of Salvarsan in Ophthalmic Practice *Proc Roy Soc Med* 9 4 Sect Ophth 98 By Surg Gynec. & Obst.

From a wide experience with opportunity for careful observation ELLIOT brought his conclusions in regard to the use of salvarsan in ophthalmic practice First in relation to optic atrophy he said he had never observed a case following the use of salvarsan and a carefully collected reports from the other Indian hospital not one was recorded in fact cases showing an atrophy of syphilitic origin reacted excellently to the drug Second that the best results were obtained by intravenous injection of 0.30 gm to 1.50 lbs body weight repeated only until Wassermann became negative In addition mercurials and iodides were also used Third that best results were obtained in recent uveal inflammation Muscular palsies reacted well With tabetic cases a d heredosyphilitic interstitial keratitis results were disappointing Fourth he referred to the opinion of Gifford that the results of salvarsan in

sympathetic ophthalmitis added a link to the evidence in favor of the protozoic origin of this disease.

HENDERSON read notes of two cases of late infection after cataract extraction in which recovery was rapid after the use of neosalvarsan

FLEMING stated that at St Mary's Hospital there had not been a case of injury to the optic nerve observed

BROWNING said that in some cases of undoubted sympathetic disease the increase in large monocular clears was not noted

LANG emphasized the variation in the monocular clear count in children especially under three years of age and the fact that care must be used in drawing conclusions from the blood picture for this reason EARLE B FOWLER

**Lang W** Case of Sympathetic Ophthalmia from Which a Secondary Cataract had been Removed after the Administration of Salvarsan *Proc Roy Soc Med* 19 4 vi Sect Ophth 95 By Surg Gynec. & Obst.

The author reports a case in a male 46 years of age in which an eye damaged by a gun shot was removed fourteen days after the injury Intus began in the previously sound eye fifteen days later four weeks after the injury and though quiet at the end of four months vision continued to decrease

Two years later there was good light perception but defective projection no ciliary injection iris vascular not atrophic and adherent to a pupillary membrane on the capsule of the cataractous lens Two intravenous injections of salvarsan 0.5 gm were given 3 weeks apart with no general and slight local reaction Five months after this, as the vascularization of the iris was reduced and the eye was less irritable the cataract was extracted and still later an iridectomy done leaving a clear pupil and a vision of 5/34

In the discussion PARSONS expressed his opinion that sympathetic ophthalmitis was a general infection as shown by the action of the salvarsan and the deviation of the blood picture from the normal

FISHER spoke of two cases in which the blood picture indicated the disease one before the appearance of other symptoms EARLE B FOWLER

**Lawford J B** Case of Severe Post Operative Plastic Iridocyclitis Treated by Neosalvarsan *Proc Roy Soc Med* 9 4 vii Sect Ophth 97 By Surg Gynec. & Obst.

The author reports a case of plastic iritis coming on after a cataract extraction in a man 63 years old. Recovery was rapid after 0.9 gm of neosalvarsan

cutting down to the space of Retzius under local anesthesia the bladder is distended with air and with two traction sutures through the bladder wall the bladder is incised. The traction sutures on each side of the wound in the bladder wall are then made fast to the aponeurosis and a large tube placed in the bladder enucleation. The second step is performed 8 or 9 days later under general anesthesia with no instrument in the urethra and the finger of an assistant in the rectum pushing up the prostate.

In reviewing results in his non malignant prostatectomies the author finds that in 37 cases in which the one-stage method was followed, 7 or 16 per cent, died while in 33 two stage prostatectomies only 2 or 6 per cent died. The ages averaged the same.

Among the 80 cases carcinoma was found in 7 and vesical calculi in 13. As to post-operative complications he had 7 cases of epididymitis, 1 case of acute septic testicle, 5 cases of hemorrhage, 3 of pneumonia and 3 of uremia.

C. R. O'CONNOR

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The author reports to date 8 successful successful cases in which he has followed this line of treatment every case resulting in the control of urine by the patient and his ability to empty the bladder without the use of a catheter. He does not apply this technique to known suspected cases of carcinoma of the prostate.

H L SA ROSE

# SURGERY OF THE EYE AND EAR

## EYE

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3. Whether it is advisable to make prophylactic treatment compulsory and punish neglect of it by law. Among 51 gynecologists 25 favored compulsory prophylaxis, 20 were directly opposed to it, and 6 undecided. Among 20 directors of university clinics 8 were in favor of it, 10 opposed and 2 undecided, while all of them were in favor of prophylaxis.

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sympathetic ophthalmitis added a link to the evidence in favor of the protozoic origin of this disease.

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Two years later there was good light perception but defective projection, no ciliary injection, iris vascular, not atrophic and adherent to a pupillary membrane on the capsule of the cataractous lens. Two intravenous injections of salvarsan 0.5 gm were given 3 weeks apart with no general and slight local reaction. Five months after this as the vascularization of the iris was reduced and the eye was less irritable the cataract was extracted and still later an iridectomy done leaving a clear pupil and a vision of 35/54.

In the discussion PARSONS expressed his opinion that sympathetic ophthalmitis was a general infection as shown by the action of the salvarsan and the deviation of the blood picture from the normal.

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and later a recurrence cleared immediately following a second dose the eye remaining quiet through further operative procedures EARLE B. FOWLER.

### EAR

Layton T B. Examination of the Internal Ear and Hind Brain by Stimulation of the Vestibular Nerve. *Cl J* 914 xl 93

By Surg Gynec. & Obst

Layton bases this article upon observation of the work of Bárány supplemented by conclusions from his own work with these tests. He enumerates first the ways in which the vestibular nerve may be stimulated and the resultant phenomena, including the pointing and falling reactions which occur in the direction of the slow movement of the nystagmus.

Bárány believes that it is the cerebellum which controls the coordination and it is stimuli passing to this which govern the pointing and falling reactions. He believes each set of muscles has a center in the cerebellum. On this theory a pointing error is evidence of disease of the cerebellar cortex or of the efferent fibers passing from it. There is reason to believe that the vermis is associated with movements of the trunk and the hemispheres with those of the limbs. A brief epitome of the central connections of the vestibular nerve shows that they are numerous and far reaching. The author believes that the results of examination of the vestibular nerve is therefore valuable in diagnosis of nervous disease especially in suspected cerebellar tumor and that the method will be developed so as to aid greatly in localization. EARLE B. FOWLER.

McCall, Jr., J: Indications for Surgery of the Ethmoid and Sphenoid Labyrinth; with Report of Cases. *J India St M As* 1914 vii, 148  
By Surg Gynec. & Obst.

The author divides the inflammatory diseases of the ethmoid and sphenoid into (1) Acute catarrhal inflammation (2) acute suppurative inflammation (3) chronic catarrhal inflammation with hyperplasia (4) chronic suppurative inflammation and (5) chronic catarrhal inflammation with suppuration.

The cases under the first two classes clear up under palliative treatment.

The cases of the chronic type the author treats surgically by removal of the middle turbinate and extirpation of the ethmoidal and sphenoidal labyrinth in order to obtain drainage and permit medication to reach the site of the diseased tissues.

He cites the history of several cases illustrating the results obtained by treating these cases surgically in which he relieved not only the local nasal and eye symptoms but neurasthenia stomach trouble and dysmenorrhea.

CLIVE gave it as his opinion that too many nasal conditions were treated surgically which would clear up under alternative and eliminative treatment.

SPORN relieves many of these cases of ethmoid inflammation by submucous resection of the septum and believes in doing as much surgery in the nose as is necessary to insure the patient against mouth breathing.

PARKER urged that before and after all intra-nasal operations of any magnitude the refractive condition of the patient be thoroughly gone over.

ELLEN J. PATTERSON

# SURGERY OF THE NOSE, THROAT, AND MOUTH

## THROAT

Bucher W M and Chamberlin W B Alcohol Injection in Tuberculosis of the Larynx  
I J A M J 914 xii 379

By Surg Gynec & Obst.

The gratifying results obtained in the relief of pain and dysphagia in laryngeal tuberculosis of the aryteno-epiglottic type with the ease of administering the treatment proves its great practicability.

The technique is as follows: With the patient in a horizontal position the left side of the larynx is grasped with the first and second fingers of the right hand and with the thumb nail of the same hand the middle point of the superior border of the thyroid cartilage is located at which point the internal branch of the superior laryngeal nerve pierces the thyroid membrane. The thumb nail marks this point and the needle is introduced perpendicularly to the skin for a distance of 2.5 cm. Moving the needle slowly about until it causes sharp pain radiating to the ear sufficient warm 85 per cent alcohol is then slowly injected to relieve the pain. The operation is then repeated on the other side. During the operation the patient should avoid both speaking and swallowing. ELLEN J PATTERSON

Paterson D R: Three Cases of Foreign Body in the Bronchus, Illustrating Points of Interest  
Proc Roy Soc Med 93 Laryngol Sect  
By Surg Gynec & Obst

Paterson reports three cases of foreign body pinkish in color which color so nearly resembled the mucosa that extraction proved difficult.

TILLEY MARTINEAU and HASTINGS each reported a case of sarcoma of the nasopharynx treated by radium emanations. Each case was treated by inserting into the growth a tube containing from 40 to 82 mg of radium bromide which was left in for twenty-four hours with disappearance of the growth in a few days. In the discussion which followed the general consensus of opinion was that the nearer the infiltrating growths approach the embryonic tissue the greater the likelihood that radium will prove beneficial. That all operable cases of sarcoma and epitheliomas should be treated with radium even though the patient should have a recurrence of the growth sooner or later.

LAYTON reported two cases of bilateral abductor paralysis both of which gave positive Wassermann reaction and improved under mixed treatment. He also reported a case of subglottic swelling of the larynx treated with salvarsan which improved rapidly obviating the necessity for immediate tracheotomy.

In the discussion which followed it was noted that salvarsan in these acute obstructive laryngeal cases frequently works wonders as it relieves dyspnea immediately while on the contrary potassium iodide first increases dyspnea. ELLEN J PATTERSON

Torek F: Laryngectomy Combined with Gastrostomy  
Surg Gynec & Obst 1914 x 515  
By Surg Gynec & Obst.

The dangers incident to the feeding of a patient through a tube in the esophagus after extensive laryngectomy especially if complicated by resection of the pharynx are injury to the suture line and infection of the sutures. These are likely to be followed by infection of the whole neck wound separation of the tracheal stump aspiration of discharges and pneumonia.

To circumvent these dangers Torek performed a Witzel gastrostomy after completion of the laryngectomy and fed his patient through the gastric fistula. Although the case was far advanced requiring not only the removal of the whole larynx and epiglottis but also a resection of the anterior wall of the pharynx and base of the tongue the after treatment was much simplified by the gastric fistula feeding. The pharynx fistula closed four and one half weeks after operation and the patient was then able to swallow both fluid and solid food. The gastric fistula closed promptly.

The addition of a gastrostomy to the extirpation of the larynx does not add materially to the severity of the operation as the laryngectomy is done by Torek under local anesthesia. In advanced cases the dyspnea forbids operating under inhalation anesthesia unless a preliminary tracheotomy is performed which however is preferably avoided in the interest of asepsis. Novocaine one-half per cent with suprarenin is employed. Deep injections block the superior laryngeal nerves and anesthetize the tissues about the trachea and larynx. Superficial injections are made corresponding to the lines of incision. The stump of the transversely divided trachea is sutured to the skin. Through this tracheal opening an inhalation narcosis may be administered for the performance of gastrostomy. This addition to the technique will prove of good service in many difficult and extensive cases.

## MOUTH

Sturgis, N G Mixed-Cell Tumors of the Soft Palate  
Surg Gynec & Obst 914 458  
By Surg Gynec & Obst

Mixed cell tumors while most commonly found in the salivary glands are occasionally found in



and later a recurrence cleared immediately following a second dose the eye remaining quiet through further operative procedures EARLE B FOWLER.

# EAR

Layton T B Examination of the Internal Ear and Hind-Brain by Stimulation of the Vestibular Nerve *Ci J* 9 4 21 93

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ELLEN J PATTERSON

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### SURGICAL TECHNIQUE

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## SURGERY OF THE SKIN FASCIA APPENDAGES

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|---|----------|--------------|--------|--|------------------|----------------------|-----------------|
| The treatment of burns                        | G Kfss   | Med Standard | MÜLLER | Deutsche ml Krztz                                    | Ztschr           | 924                  | xliu.           |
| 94 crvi 137                                   |          |              | 6      |  |                  |                      |                 |
| Treatment of furunculosis                     | GROSS    | 2 Allg med   |        | Treatment of granulating surfaces of wounds with dry |                  |                      |                 |
| Central Ztg                                   | 924 lxxx | N 3          |        | air  | POTS             | Deutsche Ztschr f Ch | 924 cxxvii, Nos |
| 1a thom's of the skin and tendons             | HOESSER  | Beit         |        | and 2  |                  |                      |                 |
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placenta. He believes that by this method the interests of the child are better conserved without detriment to the mother. Those who employ the dilating bag are careful not to use the largest size and to exert pressure gradually and with as little disturbance as possible. Some prefer to employ the bag before practicing combined version. The introduction of the bag is not always easy for those who are not accustomed to obstetric manipulations, and in unskilful hands the attempt may separate the placenta extensively and increase hemorrhage.

The results of the treatment of placenta prævia by rupture of the membranes the use of the bag, and combined version without extraction are given by Couvelaire (4) as follows. In 262 cases with a maternal mortality of 6.7 per cent and a foetal mortality ranging from 44 to 66 per cent.

In Zweifel's clinic in 100 cases of placenta prævia Schweitzer (5) treated 30 cases by combined version with a maternal mortality of 3.3 per cent and a foetal mortality of 68.8 per cent. This was increased by the death of children a few days after delivery bringing the foetal mortality to 87.5 per cent.

The intra uterine use of the dilating bag was practiced in 39 cases with a maternal mortality of 2.6 per cent and a foetal mortality of 26.8 per cent. Where the membranes could be reached and ruptured in 5 cases there was no maternal mortality but a foetal mortality of 25 per cent.

Schweitzer in his paper has collected the mortality rate of twelve other clinics and find that in their experience placenta prævia has a mortality for the mother of from 5.3 to 10 per cent. In all clinics there is considerable maternal morbidity.

Cragin to whom reference has already been made in 49 cases of placenta prævia at the Sloan maternity had a maternal mortality of 8.1 per cent with a foetal mortality of 37 per cent.

All observers agree that placenta prævia is frequently followed by post partum bleeding and that this may become fatal. Some would guard against this by the application of Momburg's bandage at the moment of delivery and others would rely upon intra uterine packing with iodoform or sterile gauze. That Momburg's bandage may become a source of danger is emphasized by Mayer (6). Anura and albuminuria have followed its use and severe pain usually accompanies this method of treatment.

In cases where but a portion of the placenta is over the internal os and dilatation proceed rapidly and uterine contractions require stimuli

tion Trapi (7) and Hauch (8) and Meyer (9) have found benefit in the use of pituitrin. Care must be taken that the cervix is dilated, or readily dilatable and that the presenting part is well in the pelvic cavity.

Where cases of placenta prævia can be transported promptly to the hospital while in good condition and before efforts have been made by vaginal manipulation to check hemorrhage or bring about delivery abdominal cesarean section offers the best chance for mother and child.

Scopiades (10) reports 3 successful cases, one of them terminating in supravaginal hysterectomy. Two of them had living children upon admission, and these children survived the operation in good condition.

Pankow (11) from the Freiburg clinic, reports 38 cases of placenta prævia treated by abdominal cesarean section with a maternal mortality of 2.5 per cent, and a foetal mortality of 2.9 per cent.

Fehling (12) believes that where the cervix is not dilated and the placenta prævia is central that abdominal cesarean section is indicated. Zweifel at the same congress drew attention to the instant cessation of hemorrhage following delivery by abdominal section.

For hospital cases, with the mother in fairly good condition Frigyes (13) considers abdominal cesarean section the best method of treatment. Kronig (14) considers abdominal cesarean section as the safest method of delivery for mother and child for patients transported to the hospital and in this opinion Sellheim (15) concurred.

The author has for several years employed abdominal cesarean section in cases of placenta prævia brought to the hospital. His operations up to date number eighteen with no maternal mortality the foetal mortality ranged from 40 to 50 per cent many cases being brought to the hospital exsanguinated the babies already dead.

A fair comparison of the results of what may be termed the private house treatment of placenta prævia by rupture of the membranes, the use of the dilating bag and combined version may be obtained by taking Couvelaire's statistics already given of a maternal mortality of 6.7 per cent and a foetal mortality of 44 to 66 per cent. With these results should be taken the statistics of Herz (16) who report 820 cases of placenta prævia treated in private houses. Among these patients the expectant plan of non interference the rupture of the membranes, dilating bags combined version and other forms of vaginal delivery were employed. The maternal mortality was 10.9 per cent the foetal mortality ranged from 40 to 60 per cent.

When these results are compared with the results obtained by abdominal caesarean section with a maternal mortality ranging from 2.5 per cent to nil and under favorable conditions a fetal mortality of 2.9 per cent the advantage of prompt treatment by section becomes evident.

This question of the treatment of placenta praevia has a wider significance than the mere handling of this condition. The results obtained in complicated parturition will not be improved materially until such cases are considered of equal gravity with ectopic gestation, appendicitis, ovarian tumor with twisted pedicle and other serious intra abdominal conditions. The latter cases are almost invariably taken to the hospital and the comparatively low mortality of these serious conditions under good treatment is acknowledged. When complicated cases of parturition receive similar attention a decided improvement in mortality and morbidity must result. Those who have had experience in abdominal caesarean section for placenta praevia have found that haemorrhage ceases as soon as the uterus is emptied, that the uterus contracts promptly and that intra uterine packing with 10 per cent iodoform gauze carried from above through the cervix and vagina is an efficient means of checking post partum haemorrhage and preventing relaxation. Simultaneously with delivery the patient may receive intravenous saline transfusion which acts as a powerful stimulant. These surgical advantages can scarcely be duplicated by methods which the general practitioner can use in private houses.

Where the placenta is not central but extends upon the upper uterine segment infiltration of the

uterine muscle with blood and necrobiosis may be present. In these cases if the uterine muscle be softened considerably it may be necessary to terminate the operation by supravaginal hysterectomy. The causes for this condition are not clear but unquestionably autolysis is present and partial separation of the placenta has caused gradually the extensive infiltration with blood. This condition must be kept in mind not only in dealing with partial placenta praevia but with accidental separation of the normally implanted placenta. It is most important when it occurs in the upper expulsive segment as it may interfere with permanent contraction of the uterus.

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Mackenzie G W: The Diseases of the Maxillary Sinus. *J Ophth Otol & Laryngol* 1914 xv 190  
By Surg Gynec & Obst

To obtain the best results in the treatment of diseases of the maxillary sinus it is frequently necessary to have the cooperation of the rhinologist and the dentist. This is especially true in acute maxillary sinusitis which may be endonasal or dental in origin also in osteomyelitis carries necrosis or foreign body in the antrum or dentigerous cysts all of which give rise to symptoms that prompt the patient to seek the dentist.

In suspicious cases of inverted or unerupted teeth the diagnosis should be determined by a skiagraph.  
CALEY J PATTERSON

Dunning H S: Some Surgical Conditions of the Jaw. *Laryngoscope* 9:4 50  
By Surg Gynec & Obst

Fractures of the jaw, epuli and dentigerous cysts are surgical conditions frequently overlooked by the general surgeon as well as by the dental surgeon.

True fractures of the upper jaw are rare but fractures of the lower jaw are very common and all are treated by means of wire cribs or rubber splints cemented to the teeth.

Epuli occur most often in Jewish women of middle age during pregnancy and are treated by thorough removal of the periosteum alveolar process and teeth involved.

Dentigerous cysts are treated by removal of the sac and content and thorough curettage of the bony cavity.  
CALEY J PATTERSON

Cadwalader W B: A Comparison of the Onset and Character of the Apoplexy Caused by Cerebral Hemorrhage and by Vascular Occlusion. *J Am Med Assn* 9:4 385  
By Surg Gynec & Obst

Spontaneous intracerebral hemorrhages are apt to be large, very small hemorrhages are rare. Of seventy-two specimens examined, only four measured less than 4 cm. in their broadest diameter.

It is certain that large hemorrhages are always fatal and it is also certain that small hemorrhages may be also and it even seems probable that hemorrhages are always fatal no matter whether small or large.

When repeated attacks of apoplexy with hemiplegia occur in the same patient, different times the final or fatal attack may be due either to softening or to hemorrhage but the former non-fatal attack is invariably caused by vascular obstruction and softening and not by hemorrhage. Repeated attacks of intracerebral hemorrhage are not compatible with life.

Small and moderate sized lesions within the brain generally described as cysts, are apt to be considered the result of vascular occlusion but in some instances such lesions may be produced by hemorrhage which has become healed. Their true origin in some cases seems uncertain but they have been classified by the author as softenings.

The duration of life is generally longer with small hemorrhages than with large ones. Sudden death within a few minutes after the onset of apoplexy does not occur even though the lesion is a large one. It is remarkable that fairly large hemorrhages may not in all instances cause rapid death. Spiller has recorded a case in which a clot was found partly encapsulated and measured 7 by 2.5 cm. yet the patient lived almost two months.

The type of apoplexy produced by hemorrhage and by vascular obstruction is not of a distinctive kind. The onset and character of the apoplexy may be exactly alike though the lesion is entirely different. But a sudden onset with rapidly developing and persistent coma usually indicates hemorrhage. A slow onset with premonitory symptoms without profound coma may be due to hemorrhage or to softening but the less severe the disturbance of consciousness the more likely that it is caused by softening and not by hemorrhage.

Premonitory symptoms are not characteristic of the lesion as a general rule they are recorded in the milder types of apoplexy in which the onset is not abrupt.

Slowly increasing loss of consciousness ending in profound coma known as invaginate apoplexy is generally due to hemorrhage.

It is doubtful if hemorrhage ever occurs without causing very distinct disturbances of consciousness but it is certain that many softening do occur without producing distinct apoplectic attacks. Most non-fatal cases of hemiplegia are caused by vascular occlusion and subsequent softening. The mere fact that life is preserved is in itself indicative of the absence of hemorrhage.

The type of apoplexy probably depends more on the size of the hemorrhage than its situation but with softening the rapidity with which the vessel is occluded may influence the rapidity of onset of the attack as well as the extent of the lesion.

EDWARD L. CORNELL

## NECK

Smith C. Does the Internal Administration of Potassium Iodide Have Any Effect on Thyroid Grafts in Guinea Pigs? *J Am Med Assn* 1914 xx No 3  
By Surg Gynec & Obst

The relation of iodine in its various forms to the changes in thyroid tissue has been investigated by Marne in conjunction with Lenhart and Williams. They made a very thorough study of the histology of normal and goitrous thyroids and observed the effect of iodine on the glands. These authors worked especially on dogs and came to the following conclusions: (1) The thyroid glands are divided into normal, colloid and hyperplastic gland. (2) When the iodine intake is lessened it is shown that the thyroid tends to undergo hyperplasia. (3) Iodine given to an animal with a hyperplastic gland causes the structure to become a colloid gland within two or three weeks.

# ABSTRACTS OF CURRENT LITERATURE

## GENERAL SURGERY

### SURGICAL TECHNIQUE

#### OPERATIVE SURGERY AND TECHNIQUE

Barrett W. A Simple Method of Sterilizing and Storing Catgut. *Surg. Gynec. & Obst.* 1914 xvi 633. By Surg. Gynec. & Obst.

Small coils of catgut strung on a thread are dried for four successive hours at a temperature of 80° 90° 100° and 110° C in a dry heat sterilizer care being taken to avoid a damp day and steam. The material must be protected by gauze from contact with metal.

The catgut is placed in alcohol for a few hours until clear then the temperature is raised gradually on a pan of sand to 160° C. and kept at that point for an hour. The container must be lined with thin paper.

The catgut is lifted out of the oil by grasping the thread the excess oil being allowed to drip off the thread is cut and the coils dropped into a solution of iodine crystals in Columbian spirits. For catgut No. 00 the proportion is one part by weight of iodine to 700 parts by volume of spirits for No. 0 1 to 600 for No. 1, 2 to 500 for No. 2 1 to 400 for No. 3 1 to 300 for No. 4 1 to 200.

The catgut is ready for use as soon as it turns dark.

It will not deteriorate in storage and coils may be used as needed.

#### ANESTHETICS

Pal, J.: Papaverine as a Vasomotor Agent and Anesthetic. (*D. S. P. pa. eria. is. Gefassmittel und Anesthetica*) *Deutsch. med. W. 14. Nr. 1914* 21, 184. By Zeitschrift für Gesamte Chirurgie.

Papaverine has a local anesthetic effect 1 to 2 drops of a ten per cent solution completely abolish the corneal reflex in the rabbit while the pupil is moderately dilated. This explains the effectiveness of the local use of opium in the form of a salve to decrease pain. Papaverine not only paralyzes the smooth muscle of the intestine but also the blood vessels. It can be used with good results in all cases of high blood pressure, for it decreases the pressure. It has also been used by the author in hemoptysis. The doses were as high as 0.04 gm intravenously and 0.1 gm subcutaneously. Not more than 0.05 by mouth or subcutaneously and 0.01 intravenously should be given as a first dose. Narotine has the same qualities as papaverine but the doses must be somewhat larger.

## SURGERY OF THE HEAD AND NECK

#### HEAD

Algot and Leriche: Resection of the Auriculotemporal Nerve and Its Effect on Parotid Secretion. (*De la resection du nerf auriculotemporal et de ses effets sur la secretion parotidienne*) *Lyon* 1914 xi 4. By Journ. de Chirurgie.

It has been known since Claude Bernard's time that the auriculotemporal is the secretory nerve of the parotid gland. In man the glandular branches originate back of the maxillary condyle and form a plexus from which the secretory fibers proceed. The incision for section of the auriculotemporal vertical incision 3 cm long between the tragus and the zygomatic tubercle reaches the nerve above the origin of the glandular branches but it is easy to dissect the trunk up to the parotid and then by slow continuous traction pull it out for 3 or 4 m which destroys all the parotid fibers.

This operation is indicated according to Leriche and Algot: three classes of cases (1) in strabismic salivary fistulae of the parotid or of Stenson's duct. (2) in the hypersalivation of certain diseases of the esophagus especially cancer. (3) in aerophagy caused by excessive salivation.

Leriche has used the operation in case of salivary fistulae and in aerophagy with marked digestive disturbances. In the former case the salivary secretion persisted for five days but much less abundantly then stopped suddenly and the fistula closed. In the other case the digestive disturbances had been attributed to gastric hypersecretion, ulcer and treated medically without success. Leriche concluded they were due to aerophagy caused by excessive salivation and resected the right auriculotemporal with excellent results. The salivary secretion was reduced and the aerophagy with the accompanying digestive troubles disappeared. *Ch. L. 1914*

clavicular fibers of the pectoralis major as this part may safely be left behind and furnishes a covering for the axillary vessels and nerves. This part of the muscle should also be removed if an upward extension has occurred.

The skin incision is carried well forward over the anterior axillary fold toward the outer end of the clavicle curving downward over the fullness of the shoulder. The incision is then carried through the fascial coverings of the muscle below the clavicle. This fascia is dissected off until the interval between the sternal and clavicular portion of the muscle is reached then the incision is carried over the anterior border of the latissimus dorsi. This outlines the axilla. The insertion of the pectoralis major is next isolated clamped and cut close to the humerus.

With traction on this the axilla can be cleaned out *en bloc* by sponging downward and inward. The object is to clean out the axilla completely and pack it off with gauze before the main tissue containing cancer is incised also in this way the intercostal vessels can be exposed and clamped before being cut.

The author usually uses an axillary and some times a subclavicular drain for 48 hours.

This operative procedure is of advantage because it is practically bloodless and because there is a minimum possibility of dissemination of cancer tissue.

EVGENE CARY

**Jacqueroz Pressure on the Thorax in Place of Artificial Pneumothorax, in the Treatment of Pulmonary Tuberculosis** (*La compression thoracique remplace le pneumothorax artificiel dans le traitement de la tuberculose pulmonaire*). *Säcker Radsch Med* 94: 47.

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

Having observed that the insufflation of a very small amount of nitrogen into the thoracic cavity has a favorable effect on the symptoms of tuberculosis the author tried to produce a similar effect by applying a band around the thorax. The band which is passed around the lower part of the thorax has small pieces that enable it to be fitted and is kept from slipping down by two bands over the shoulders. It is gradually drawn tighter and finally is left on day and night. Wearing it changes the type of breathing markedly and is said to act favorably on pulmonary tuberculosis.

BURCKHARDT

**Murphy J. B. Sarcoma of Thymus** *S. & C.*

*J. B. Murphy* 93: 115.

By Surg. Gynec. & Obst.

A woman of 69 was admitted on account of a large mass on the anterior chest wall just below the root of the neck. Twenty years before she had noticed a small hard mass to the left of the median line on a level with the third rib. Ten years later she noticed a similar mass to the right of the median line. These gradually approached each other and seemed to coalesce. About one year previous she

had noticed a third mass in the midline above the other two. This mass had been growing rapidly in size especially in the past three or four months. When admitted there was a large pyramid shaped tumor pointing toward the chin irregular in shape and consistence but definite in outline the base was hard and fixed to the sternum and costal cartilages with areas of softening above the large lobe pointing toward the chin was very hemorrhagic and soft. She had never had any constant pain—only occasional twinges of sharp pain. The mass did not pulsate.

In the autumn of 1911 she had a continuous hæmaturia passing large clots of blood as well as bloody urine. She was in bed six weeks but had no pain over the kidney region at that time or at any time since.

The tumor was aspirated on both sides and bright red blood withdrawn. The needle was put in some distance under the skin and the condition found to be aneurysmal sarcoma. Operation was deemed inadvisable but X ray treatments were advised. The latter course showed necrosis of the skin and formation of a clot preventing hæmorrhage. The skin destruction was from tumor invasion and was not caused by the X ray.

Up to 1912 there were reported fifty four cases of the various types of sarcoma. The carcinomata are rare only 11 cases being recorded. These two types constitute the great bulk of tumors in the thymus. The mixed and the benign tumors occur less frequently.

**Heimann F. Experimental Study of the Thymus the Ovaries and the Blood Picture** (*Thymus Ovarien und Blutbild. Experimentelle Untersuchungen*). *München med. W. hseher* 1913: 17.

829

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

Clinical observations support the hypothesis that the ovaries secrete substances that inhibit lymphocytosis while the products of secretion of the thymus gland cause a lymphocytosis.

Heimann made an experimental study of the effect of the thymus and ovaries on the blood picture in rabbits. The ovaries or thymus glands of the animals were removed and after a certain length of time the juices expressed from ovaries or thymus glands were injected intraperitoneally. After the extirpation of the ovaries a true lymphocytosis developed after the injection of ovarian fluid there was a rapid fall to below normal in the lymphocyte count after the injection of thymus extract a rise was noted. After thymectomy a fall in the lymphocyte count was observed it rose again, however after the injection of thymus extract while after the injection of ovarian extract there was a fall again. Therefore the conclusion is that failure of the thymus secretion causes a fall in the lymphocyte count administration of thymus substance a rise. After removal of the ovaries the lymphocyte count rises after the injection of ovarian juices it falls. The thymus and



Marine claims that a colloid gland is that form of thyroid most nearly related to the normal gland to which a hyperplastic gland can revert. He states that there seems to be a minimum amount of iodine necessary to maintain a normal gland structure and when the amount falls below this minimum hyperplasia begins. There is a progressive decrease in the iodine content in the thyroid from normal glands through the various stages of hyperplasia in other words the amount of iodine and the degree of thyroid hyperplasia vary inversely in relation to each other. The author further claims that thyroid hyperplasia is a physiological reaction to the needs of the body and is analogous to regeneration after partial thyroidectomy.

Smith having in mind this work of Marine's and of other investigators attempted to find out if in thyroid glands the administration of potassium iodide in any way tend to overcome the thyroid need after partial thyroidectomy as claimed by Marine and thus prevent or retard the growth of the grafts — which Crstiani states is controlled by the need.

Some 54 animals, with 162 grafts were used in these experiments and the author was able to recover successful grafts in a great majority of the animals. Some young grafts were studied in order

to observe the early regeneration of the tissue. The younger grafts showed a central necrosis, with only the peripheral thyroid tissue persisting. The central necrotic area became gradually replaced by a growth of connective tissue from the periphery. In the older grafts the thyroid tissue appeared normal, except for the presence of increased connective tissue. In some cases there seemed to be relatively more connective tissue in the animals which were given potassium iodide than in the controls, but the condition was not constant.

The author asserts that no conclusions can be drawn from his experiments as to the condition of the homotransplants. From his investigations he believes that the administration of potassium iodide to a guinea pig in which a piece of its own thyroid gland has been transplanted does not have any marked effect on the behavior of the graft. He did not find atrophy of the grafts as reported by Crstiani after the use of thyroid tablets. Secondly he believes that thyroid grafts show early central necrosis. The peripheral acini only remain intact. Regeneration takes place by the growth of thyroid tissue from the peripheral acini toward the center. These findings, he states, agree with those of von Lubsberg Sultan, Crstiani and Enderlen.

GEORGE E. BERRY

## SURGERY OF THE CHEST

### CHEST WALL AND BREAST

Hrynan R. C.: Cancer of the Breast in a Boy Fifteen Years Old. *S. & Gynec. & Obst.* 914 xvi 545  
By Surg. Gynec. & Obst.

One per cent of all tumors of the breast occur in the male, two per cent of this number are malignant. Trauma is responsible for 13 per cent of the female mammary carcinoma and 50 per cent of the male. The average age of the disease in the male is two years later than in the female. The youngest case is that of a boy 12 years of age reported by Blodget. The oldest is reported by Lunn in a man ninety-one years of age a shoemaker. The author's case was a boy fourteen years and eight months old who had been struck by a golf ball on the right nipple. Four months later upon examination a small tumor was found which when operated upon showed a scirrhous carcinoma of rather active cell proliferation.

Occasionally there are embryological developments of subepidermal nodules which may extend into the region of the male breasts, which are histologically impossible to differentiate from carcinoma yet they are not cancer. The beanlike submucous nodules found now and then in the appendix belong to this group. They are unquestionably of congenital origin. Aschoff calls them submucous naevi. In the report of Mayo's clinic by McCarty these nodules are called carcinoma of the appendix

and have been observed according to McCarty in males from nine to eighty years of age.

Pearson W. The Technique of Operation for Carcinoma of the Breast. *Med. Press & Cm.* 19 4, xxvii, 464.  
By Surg. Gynec. & Obst.

The author believes that the principles governing surgical operations for malignant disease should be (1) To avoid dissemination and wound implantation of cancer cells during operative procedures (2) to minimize hemorrhage and shock (3) to minimize the risks of infection (4) to avoid unnecessary mutilation or loss of function.

The work of Handley has shown that the permeation of cancer-cells along the lymphatic vessels takes place primarily along the lymphatic vessels in the fascial planes and that invasion of the skin muscles and viscera is secondary. For this reason all the lymphatic and fatty fascial tissues from the axilla and axillary vessels, and from the chest wall including the fascial covering of the upper portion of the rectus abdominis muscle should be removed.

The author advocates removal of a large area of skin equidistant in all directions from the tumor the removal of all subcutaneous and deep fascial covering from the clavicle above to the epigastrium below and from beyond the midline in front to the posterior axillary fold behind and the removal of the pectoral muscles with the exception of the

clavicular fibers of the pectoralis major as this part may safely be left behind and furnishes a covering for the axillary vessels and nerves. This part of the muscle should also be removed if an upward extension has occurred.

The skin incision is carried well forward over the anterior axillary fold toward the outer end of the clavicle curving downward over the fullness of the shoulder. The incision is then carried through the fascial coverings of the muscle below the clavicle. This fascia is dissected off until the interval between the sternal and clavicular portion of the muscle is reached then the incision is carried over the anterior border of the latissimus dorsi. This outlines the axilla. The insertion of the pectoralis major is next isolated, clamped and cut close to the humerus.

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ERGEE CARY

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the ovary have an antagonistic effect on the blood picture thymus extracts increase lymphocytosis ovarian extracts decrease it Klose

### TRACHEA AND LUNGS

Blüwels, I I An Unusual Case of Stenosis of the Trachea as a Result of Primary Tuberculosis of This Organ (U cas rare de ténose de la trachée par suite de tuberculose primitive de cet organe) *Rev de la Clin Propé d Prof* 013 v 87 By Journal de Chirurgie

A woman of 30 had had a goiter for 9 years. For a year she had been complaining of difficulty in respiration dyspnea and cough but no signs of syphilis or tuberculosis.

On admission to the hospital the dyspnea was extreme. Oppel immediately performed strumectomy and then tracheotomy. In spite of this the asphyxia continued and the patient died in 48 hours. During life the existence of an obstruction at the bifurcation of the bronchi had been recognized.

At autopsy retraction of the bronchi was found for a distance of 5 mm the mucous membrane was thick indurated and yellowish the right bronchus was more contracted than the left and on the external wall there was a caseous and calcified gland. Below the bifurcation there were other hypertrophied glands. The lungs were normal but on the pleura of the lower lobe of the right lung there was a small calcified tubercle. Microscopic examination showed that the lesions were typical tubercular nodules with giant cells but there was nowhere softening or caseation. M Goss

### HEART AND VASCULAR SYSTEM

Carrel A and Tuffier T Anatomico-Pathological and Experimental Study of the Surgery of the Orifices of the heart *Med Pres & Circ* 94 cal 530 By Surg Gynec & Obst

As a result of their researches the authors state that pure mitral stenosis certain aortic stenoses and some atresias of the pulmonary artery will be found even in well-defined cases to be benefited by surgical intervention.

Aortic stenosis may occupy one of three regions valvular supra-aortic or subaortic. The subaortic variety is inaccessible to surgical treatment on account of its position below the fibrous ring at the level of the mitro-aortic canal supra-aortic stenosis is rare. The truly surgical variety is the valvular stenosis which is characterized by adhesions between the free borders of the valves, with thickening and malformation of their margins. It is simply a ring with indurated margins. Occasionally the lesion extends as far as the fibrous circle of implantation of the aorta on the aortic wall. Above the narrowing the aorta is healthy below the heart suffers from the effect of the constriction on the current of blood.

Stenoses of the pulmonary artery present the same

anatomical forms. The valvular stenosis is the most frequent form. The fibrous arc of insertion is intact and the welding of the valvular margins creates a sort of diaphragm convex toward the pulmonary artery the more or less narrow central orifice of which is susceptible of enlargement. It is a paradoxical fact that the pulmonary artery is dilated above the seat of stenosis but this is due to the loss of elasticity of its walls. There may be pure stenosis of the pulmonary artery in young subjects without any alteration of the myocardium or congenital malformation of any other orifice. This condition is one eminently favorable for mechanical treatment.

Congenital tricuspid stenoses which present the same characters are especially suitable for surgical intervention on account of the integrity of the cardiac organ.

When an artificial lesion presents itself with the anatomical conditions which permit attack while the state of the cardiac muscle and coats of the vessels justify the reasonableness of the intervention it does not follow that such procedure is actually indicated. The lesion which tends to provoke grave or fatal trouble in the near future is the genuine indication that points towards the adoption of surgical efforts. It appears that such indication is of rare occurrence but it does present itself definitely in certain cases. Some aortic stenoses of slowly continuous progressive development and accompanied with cardiac hypertrophy may likewise be regarded as mechanical lesions which are amenable to mechanical treatment i.e. to enlargement of the valvular chink.

In operating the dangers to be avoided are wounds of the coronary arteries hemorrhage entrance of air into the cavities of the heart and arteries and finally thrombosis. These dangers are not always grave. Wounds of the coronary veins may be tied with impunity but the vessel should not be ligated at its extremity. Wounds or ligation of a coronary artery have a varying gravity according to the part of its course affected. Wounds near the origin of the artery even when made with the finest needle always cause momentary arrest of the heart's action which is followed by a relatively prolonged a hythmia. Central application of a ligature is always fatal the heart is arrested is dustole and resuscitation is impossible.

The occurrence of hemorrhage within certain limits is not very serious. Its intensity is naturally in proportion to the extent of the wound and also to the direction of the latter. The one hemorrhage which is grave and difficult to arrest is that from the right ventricle. There are several means to combat hemorrhage. Hypertension should be maintained at a minimum but is order to obtain a more complete provision of haemostasis suitable to the surgery of the heart it is necessary to treat the circulation. This is done by applying an elastic ligature to the arterial pedicle for a short period or preventing the blood from entering the heart by compressing one or both venae cavae.

The entrance of air into the right ventricle does not present any great danger. On the other hand this accident is an extremely grave one in the case of the left ventricle as the air penetrates the coronary vessels producing a fatal cardiac anæmia.

Thrombosis is an accident of corresponding gravity but it rarely occurs. The authors attach great importance to having the margins of a cardiac wound smooth and regular thus preventing thrombosis. Very fine thread is used in suturing and the endocardium is not included.

The danger zones are then discussed in detail and the sensitiveness of the various structures composing the heart are dealt with. Certain manageable zones are described and from their study the authors conclude that the cavities of the heart may be opened singly and their walls resected without grave injury to the ulterior functional capabilities of the organ.

When preparing to operate it is necessary to interrupt the circulation to an almost complete degree. The arterial pedicle—pulmonary artery and aorta—may be compressed for a period not over forty five seconds on account of the exaggerated dilatation of the right heart. With regard to separate compression of the aorta this is better tolerated in proportion to the distance of its seat of application from the origin of the aorta and the possibility of even diminished irrigation of the nerve-centers. Simultaneous compression of the pulmonary veins produces death after some minutes through default of oxygenation of the cardiac muscles but individual forcipressure of these vessels present no gravity.

EDW. ED L. CO. ELL.

### PHARYNX AND OESOPHAGUS

Crump, A. C. A New Aid for the Diagnosis of Stricture of the Oesophagus. *J. Am. M. A.* 94 Jan 47. By S. G. Gynec & Obst.

The author's method consists in the use of sausage skin, gold beater's skin. Gold beater's skin is preferable as it is tougher but it cannot at present be obtained in satisfactory lengths.

The sausage skin is cut in lengths of about 50 mm thoroughly washed inside and out and placed in jars of a solution of 1 per cent liquor formaldehyde and 10 per cent glycerine. The distal end is tied with silk floss so as to make a bag, the proximal or mouth end is shipped over a rubber ferrule large enough for the skin to fit snugly and tied.

The bag as it is then prepared is only a string. Before giving this to the patient it is best to cocaine the pharynx and oesophagus to prevent retching and coughing this however is not always necessary. The patient then swallows the skin with the aid of a little water. When the stricture admits a No. 15 French olive it is best to keep the skin straight by running it over a capillary rubber tube. This is easily done by first tying the upper end on the ferrule holding the ferrule under a water tap and allowing the water to carry the tube through. There should be a small metal tip on the end of the tube so that the skin can be tied without collapsing the rubber. The stomach contents can then be aspirated to show if the tube has passed into the stomach. It is surprising how easily a patient with the smallest stricture can swallow one of these skins and how readily it untwists itself on being filled.

After the skin is down a thick bismuth mixture is allowed to flow in from an irrigator holding a couple of hundred cubic centimeters of cream at a time. After the bismuth is down the skin is pulled up a little and allowed to drop back in order that any kinks that may possibly form may be untwisted. The method of filling and pulling until the bag is full to the pharynx is continued a stopper is put into the ferrule and the patient given a couple of teaspoonfuls of bismuth mixture to swallow outside the tube a teaspoonful at a time to fill any irregularities or pockets not outlined by the bag. There may be some difficulty in removing the bag in the smaller strictures but this need not occasion alarm.

The patient is placed face downward over the edge of the table and gentle but firm traction given the skin the ferrule being held over some small vessel. The main thing is to take plenty of time.

EDW. ED L. CORVELL.

## SURGERY OF THE ABDOMEN

### ABDOMINAL WALL AND PERITONEUM

Haeblerlin. Treatment of Circumscribed and Diffuse Purulent Peritonitis following Appendicitis. (Über die Behandlung der circumscribten und diffusen eitrigen Peritonitis im Gefolge der Appendicitis.) *Beitr. Chir.* 94, 2: 99.

By Zentralblatt für Chirurgie u. Grenzgeb.

The author reports 346 operations for appendicitis, of these acute appendicitis 34, interval operations 6, incisions for abscess 4, of these without any mortality, chronic appendicitis 66 with one death from peritonitis after rupture of the intestine, 14 of destructive appendicitis with

circumscribed peritonitis with 4 deaths, 1 due to protracted anaesthesia, 1 to secondary hemorrhage and 2 to progressive retrocaecal phlegmon, appendicitis with severe general peritonitis 4 with 6 deaths or 24 per cent mortality.

The following principles were observed. In circumscribed suppuration after sponge gauze treatment of the abdominal cavity appendectomy was done if followed by complete closure of the abdominal wound in which room for a small drain was occasionally felt. Douglas pouch was always examined and if there was an exudate it was sponged up and the pouch irrigated through two long drains.

after that a complete closure of the abdominal wound was made

In diffuse purulent peritonitis a thorough and long-continued irrigation of the whole abdominal cavity was given and drains inserted on the right and left extending into Douglas pouch these being left for at least 24 hours. During the irrigation the patient was kept in the sitting position. The greatest advantage of the primary closing of the wound is that it prevents the occurrence of abdominal hernias. But drainage of the abdominal cavity is sometimes necessary for the author believes contrary to Rottger that under pathological conditions there may be an intra abdominal pressure that may cause the collected secretion to be discharged through the drain. Care must be taken that the drain does not become occluded.

BRACKMAN

Mein I F: Entration of the Diaphragm; with Report of a Typical Case with V. Ray D. Gnos. S. J. Gynec. & Obst. 1914 3 2 34

By Surg. Gynec. & Obst.

After a brief review of the literature Stein reported a case of eventration diaphragmatica in a new born babe. There was a marked asphyxia livida at birth requiring twenty minutes artificial respiration. At birth a dextrocardia retracted abdomen and undescended testicles were noted. The child could not nurse because of convulsive spells associated with deep cyanosis and very rapid respiration.

On the fourth day of life a roentgenogram showed an apparent absence of the diaphragm on the left side with bowel shadow in the chest and the heart on the right side. In attempt to give a bubble bath the child was given subcarbonate of bismuth in the early morning feedings and roentgenograms taken three and six hours afterwards. Another feeding with bismuth was then given and a second picture immediately taken. These roentgenograms positively identified the stomach and part of the small and large bowel in the left chest and the diaphragm could be made out as a fine line above the visceral shadows. The child lived twenty six days during which time it suffered several severe crying spells each associated with deep cyanosis and increased rate of respiration and to one of which it finally succumbed.

Prior to the post mortem a tracheal catheter was introduced through a tracheotomy opening and a bismuth suspension injected into the bronchi. A roentgenogram taken showed the lower lobe of the right lung to be the only portion functioning and gave the best picture of the eventration. The relations of the viscera were photographed after opening the parietes. The viscera were removed in toto and preserved in Kaiserling.

Meyer E. Obturator Hernia (Über Hernia obturatoria). Arch. f. kl. Ch. 19 4 411 497  
By Zentgraf, f. d. ges. Chir. Gernzgeb

This work adds to the 5 cases of incarcerated obturator hernia published since 85 6 new ones

operated upon at the Leipzig clinic discusses the symptomatology in detail and tries to decrease the difficulty of an early and correct diagnosis by assembling all signs that are of any value. Obturator hernia is typically a disease of old women. The author's statistics show 79 per cent of the cases in women over 60 years of age and they agree on this point with those of other authors. Aside from the pathognomonic signs of incarceration of hernia, symptoms of intestinal occlusion and Romberg's sign vaginal or rectal examination often shows an elastic painful resistance in the region of the obturator foramen. Differential diagnosis must be made from osteomyelitis of the pubic bone, intraperitoneal exudate and incarcerated femoral hernia. The diagnosis is however generally only a probable one therefore operation should be early.

Taxis is dangerous as in one fourth of the cases there is gangrene on account of the narrow sharp-edged unyielding hernial opening. Hemostasis gives a very limited field of operation therefore the operation of choice is laparotomy. It has the advantage over the femoral incision of giving a better view of the field of operation of making it easier to loosen the incarcerated loops of intestine and to perform intestinal resection if necessary. Recurrence is to be expected in 25 per cent of the cases so an attempt should be made to avoid it by placing a flap of peritoneum from the pubic bone over the opening or better still by covering over the obturator foramen with the pectineus muscle. The prognosis has markedly improved in recent years.

Crasner's statistics including 213 cases from 1730 to 1890 shows the high mortality of 75.81 per cent while the author's show a mortality of 33.27 per cent. This high mortality is explained partly by the fact that the majority of the patients are old women in a poor state of nutrition.

From the fact that elderly women are chiefly affected the author has drawn some conclusions as to the mode of origin of obturator hernia. The obturator foramen is comparatively larger in women than in men frequent pregnancies cause laxity and folding of the peritoneum which may project through the opening which in a condition of emaciation is made more easily penetrable by the removal of the cushion of fat. Also subserous lipomata which often co-exist with this form of hernia may be responsible for its origin. There have never been uniform views as to the etiology of obturator hernia. In conclusion the author gives a detailed account of the six cases treated at the Leipzig clinic.

HARR

Griffith J. P. C. Diseases Connected with Meckel's Diverticulum with Especial Reference to Diverticulitis. J. Am. Med. Ass. 9 4 121 124  
By Surg. Gynec. & Obst.

The author reports a case of inflammation of Meckel's diverticulum occurring in a child 19 months old. The condition followed a slight traumatism to

the abdomen. One week later the infant began to complain of pain in the abdomen which was diagnosed as indigestion. Several months later he passed a red colored stool and continued to do so at intervals for several months. He became very anæmic but did not waste materially. The abdominal pain finally became very severe and it was necessary to employ opiates. The condition was relieved by emetics and the hæmorrhage from the bowels discontinued after the injection of horse serum. No definite diagnosis could be made and when the child was seen by the author it was in a moribund condition. It died from exhaustion five months after the injury.

Various lesions associated with this diverticulum are discussed briefly. Under inflammation the etiology, symptoms and diagnosis are considered. The diagnosis has rarely been made during life. The diagnostic features may be summarized as follows:

1. Localization of the pain and tenderness not so often at McBurney's point as somewhat higher and to the right of the umbilicus or even about it or in some entirely different region.
2. An area of puffiness or of firm resistance in this region.
3. An absence or slight degree of meteorism at least early in the attack.
4. The presence of blood in the stools and in the vomited matter.
5. The history of the earlier existence of an umbilical fistula or of some malformation elsewhere in the body.

EDWARD L. CORDELL.

### GASTRO-INTESTINAL TRACT

Purle A. H. Preparation of Barium Sulphate for the Opaque Meal. *Am J Roentgenol* 19 4 : 20.  
By Surg. Gynec. & Obst.

The author discusses the disadvantages of barium sulphate in the preparation of an opaque meal and suggests the following method which overcomes the objections.

A gallon jar is filled to one quarter its capacity with Merck's barium sulphate pure. Very hot water is added to nearly fill the jar and the mixture is stirred with a heavy stick to the consistency of rich milk. It is then allowed to settle for an hour when the water is poured off. This procedure is repeated three times and the mixture is then allowed to settle over night. In the morning the water is poured off and the barium is ready for use.

The author uses the upper layers of the barium mud for stomach work mixing it with buttermilk in the proportion of 1 to 3. The lower layers which are coarse and contain grit are used for the preparation of opaque enemata.

At the end of the day the remaining barium is again washed with hot water and allowed to settle until the following morning. Care should be taken that no milk or other food is added to the barium mixture.

W. A. EVANS.

Smith G. M. An Experimental Study of the Relation of Bile to Ulceration of the Mucous Membrane of the Stomach. *J Med Research* 19 4, xxx No 2 147. By Surg. Gynec. & Obst.

The author's purpose in this paper has been to record a number of experimental observations on the relation of bile in the presence of an excess of hydrochloric acid of 0.5 per cent strength to necrosis and ulceration of the mucous membrane of the stomach to describe the character of the lesions produced by the interaction of bile with hydrochloric acid upon the epithelial surface of the stomach and to define some of the conditions under which such lesions were most readily produced.

It occurred to the author that the action of bile on the stomach mucous membrane although at times clearly harmless could be intensified under abnormal conditions, so that it might cause ulceration of the gastric mucous membrane. The animals used for his experiments were the cat and the dog — chiefly the former. He found early that the gastric mucous membrane of the dog showed a greater resistance to injury produced by bile and hydrochloric acid than did the stomach of the cat.

The application of bile and hydrochloric acid to the stomach was performed in several different ways: (1) by direct application by incision of the stomach (2) by a stomach tube (3) after opening the abdomen by injecting into the stomach bile and acid through an aspirating needle passed through the wall of the stomach (4) by injecting bile and acid backward into the stomach through the pylorus by means of an aspirating needle passed through the wall of the duodenum (5) by anastomosing the gall bladder with the stomach after ligating the common bile duct and subsequently introducing acid into the stomach of the animal by means of a stomach tube.

As a result of this study and the author's experiments the following facts are obtained:

1. When introduced into the stomach of the cat or the dog bile in the presence of an excess of 0.5 per cent hydrochloric acid may cause injury to the gastric mucous membrane whereas bile or 0.5 per cent hydrochloric acid introduced alone into the stomach is without harmful effect.

2. Lesions of the gastric mucous membrane produced by bile in the presence of an excess of 0.5 per cent hydrochloric acid, consist of necrosis of epithelium and interglandular tissue with hemorrhages into the mucous membrane as a result of which small superficial ulcers may form.

3. Ulceration of the gastric mucous membrane following the introduction of bile and hydrochloric acid into the stomach, injected by way of the duodenum is produced most readily between the third and the fifth hour after meals least readily in the fasting stomach or shortly after the ingestion of food.

4. If confined in the fasting stomach by ligating the œsophagus and the duodenum bile in the presence of an excess of 0.5 per cent hydrochloric acid is

more toxic for gastric epithelium than either bile alone or bile in the presence of an alkaline solution

5 The presence of mucus in the stomach protects gastric epithelium against injury by bile and hydrochloric acid  
 GEORGE E. BEISSY

**Caille P:** Clinical Diagnosis of Certain Forms of Localization of Ulcer of the Stomach and Duodenum (Diagnostic clinique de certaines formes de localisation de l'ulcère de l'estomac et du duodénum) *Thèse et doc. Par* 914

*By Journal de Chirurgie*

In this important work based on 56 cases the author shows the possibility of making a differential diagnosis of ulcers as to location and age. At present differential diagnosis can be made between ulcer of the pylorus of the duodenum and of the lesser curvature. In typical cases the diagnosis is easy in others it is difficult or even impossible depending on the age of the ulcer and the sclerosis accompanying callous ulcer.

1 In pyloric or juxta-pyloric ulcer the diagnosis is easy in marked forms with pronounced signs of stenosis or a marked degree of Reichmann's syndrome late pain presence of residual liquid after fasting hypersecretion of hydrochloric acid these are the symptoms of reflex spasm of the pylorus but the diagnosis of mild forms of Reichmann's syndrome is more difficult. The mere existence of late pain in slight paroxysmal crises without residual fluid or hypersecretion of hydrochloric acid is the earliest manifestation of pyloric spasm.

The chief characteristic distinguishing ulcer of the duodenum from pyloric ulcer is that it does not react on the pylorus and produce spasm. The more recent the ulcer the more pronounced the symptomatology localization of the pain on the right frequent hemorrhages especially intestinal absence of gastric phenomena. Radiography shows particularly rapid evacuation of the stomach. In old cases the syndrome is modified by the addition of juxta-pyloric symptoms, from spread of the ulcer.

3 Ulcer of the lesser curvature is characterized by the more prompt appearance of the pain than in pyloric ulcer by the fact that it is more resistant to alkali treatment that it is situated to the left of the median line and irradiates toward the back, and there are no pyloric symptoms. Radiographic examination shows a megagastric spasm or tenosis, a retraction of the lesser curvature the picture of a diaphragm. In case of recent ulcer the differentiation has to be made chiefly from ulcer of the duodenum in case of old ulcer when the pyloric symptoms have been added.  
 J. L. ROUX BRUGES

**Cart R M A Br:** Consideration of Some Recent Tests for Gastric Carcinoma *Surg Gycc & Obst* 94, 114, 645  
*By Surg. Gynec. & Obst.*

The author considers a few of the more important tests for gastric carcinoma and incidentally for

carcinoma in general, with a view of ascertaining the present status of laboratory diagnosis in this condition.

The tests fall into three groups (1) those dealing with the stomach contents (2) those dealing with the urine and (3) those dealing with serological reactions.

In the author's opinion the tests in the third group would hold the most promise theoretically since it is reasonable to suppose that the blood of persons suffering from malignant disease would contain a substance or substances not present in the blood of healthy individuals.

However an early specific diagnostic means for carcinoma has not yet been discovered. Many tests have been proposed which supply a small degree of confirmatory evidence but in these cases they are too complicated and difficult technically and consequently cannot be applied by the general practitioner who is the one most in need of a specific test in order that he may get his cases to operation in time.

All the facts should be explained to the patient together with the dangers of delay and he should be allowed to choose between uncertainty and an exact diagnosis obtainable only through an exploratory operation.

**Hartmann M H:** Hypertrophic Stenosis of the Pylorus in the Adult (Sténose hypertrophique du pylore chez l'adulte) *Bull Acad et méd* Pa 94 1211 134  
*By Journal de Chirurgie*

A man of 57 who had never had a y stomach trouble began to lose his appetite and have digestive disturbances which grew worse continually. Hartmann examined him 18 months after the beginning of symptoms when he showed all the signs of stenosis of the pylorus omitting emaciation, penitential waves stasis in the morning. The chemistry of the gastric contents was affected very little there was a slight decrease in pepsin. In 1912 Hartmann performed pylorotomy and implanted the duodenum into the stomach. The patient made an uneventful recovery and is well at this time.

On examination of the specimen there was no engorgement of the glands. The pylorus was thick and hard. There was only a very small orifice surrounded by a ring of mucous membrane projecting into the intestinal cavity. Under the microscope there was no trace of new-growth. The pyloric muscle and submucous coat were thick and sclerotic. The mucous membrane did not show any lesion except a slightly cicatricial zone which seemed to represent a healed superficial ulcer. The macroscopic appearance was almost exactly similar to that found in hypertrophic stenosis in infants, the only difference being that the inflammatory process was more marked than generally is in infants, although it has been found in them in some cases. He thinks the inflammatory lesions in his case may be explained by the previous existence of a superficial ulcer of the mucous membrane. *Carcinoma.*

Enriquez and Gosset Exclusion of the Pylorus  
(Remarques sur l'exclusion du pylore) *Bull. I*  
*mém. soc. d. h. de P.* 1914 21 337  
By Journal de Chirurgie

Enriquez and Gosset believe that exclusion of the pylorus for benign lesions is not performed in France as often as it should be. Many surgeons say it is useless and that simple gastro-enterostomy is sufficient to give them excellent late results. If the statistics of the late results in a large number of cases are studied however it will be found that the percentage of insufficient mediocre or even bad results after simple gastro-enterostomy is entirely too high. They are generally excellent in marked cases of cicatricial stenosis but are incomplete where the pylorus is patent and often in duodenal ulcers. This insufficiency in the late results of simple gastro-enterostomy can also be shown clinically and radiologically. Clinically some patients continue to suffer either continuously or in paroxysms hyperchlorhydria persists in spite of diet and bismuth treatment and hemorrhage may reappear. Radiology shows that a greater or less part sometimes all of the food continues to pass through the pylorus. The authors publish 7 cases of exclusion of the pylorus 4 of which are too recent for us to be able to judge of their final results but 3 show clearly that secondary exclusion of the pylorus may produce recovery where simple gastro-enterostomy has failed. They recognize only one technique that of entire exclusion with section of the stomach within the pylorus the others are insufficient as shown by Harrison's recent radiographic study. Exclusion is especially indicated in lesions at or near the pylorus with marked hyperaesthesia of the mucous membrane and extreme hyperchlorhydria but not accompanied by stasis of food. Duodenal ulcer with relative patency of the pylorus which may be demonstrated by roentgen rays is a major indication for exclusion.

Quénec recalled that he had presented a patient 26 or 28 months ago in whom exclusion of the pylorus had been performed during a period of acute hemorrhage from a duodenal ulcer. He saw him again recently and he was in excellent health had never had any further hemorrhage and was earning his living.

Quénec believes a distinction should be made between duodenal ulcers and pyloric ulcers, for the same treatment does not apply. He speaks only of ulcers which have caused no change in the size of the pylorus. In ulcers of the duodenum it seems rational to complete gastro-enterostomy by exclusion.

In these cases the pylorus is not only patent but enlarging. This incompetence of the pylorus in conjunction with the hypertonicity of the stomach causes such rapid accumulation of the stomach contents sometimes difficult to collect the residual of the test meal. In such conditions exclusion is a self-indicated and preferable supplement to gastro-enterostomy. In pyloric ulcers they are usually cured by simple gastro-enterostomy if it is well done.

If the bismuth passes through both the opening and the pylorus or even through the pylorus alone it makes no difference—if the functional trouble has disappeared. To show the usefulness of exclusion a number of cases should be collected such as those of Gosset where after gastro-enterostomy many or all of the symptoms have persisted—to disappear only after a secondary exclusion was performed.

J. DUBOIS

Stone H. B. Bernheim B. M. and Whipple G. H.: The Experimental Study of Intestinal Obstruction. *A. S. S. Phila.* 1914 4 74  
By Surg. Gynec. & Obst.

In dogs a loop of the duodenum and high jejunum may be isolated by double ligatures and the continuity of the alimentary tract reestablished about the closed loop such a condition is rapidly fatal.

The conditions of the experiment may be so controlled as to exclude circulatory disturbances food derivatives gastric pancreatic and biliary secretions as possible causes of death.

The dogs die with characteristic symptoms and present typical autopsy findings the whole course of the post-operative disturbances suggesting an intoxication of some sort.

A fluid collects within the closed loops that is highly toxic producing when injected into normal dogs a reaction much like that of dogs with closed loops. This toxin is believed to be the cause of death.

The toxin is formed by the mucosa of the closed loop some of it being secreted into the lumen and some remaining within the cells of the mucosa.

If the closed loops be drained externally the post-operative course of the animal is altered but varying degrees of intoxication still are observable and the presence of toxin within the mucosa of the drained loops is demonstrable.

Absorption takes place not only from the loop content but from the mucosa direct the latter being a quite important source of intoxication.

There are various possible explanations for the perversion of function that causes the mucosa to become a source of intoxication but none are yet proved. The fundamental explanation of the change is as yet unknown.

It is possible by the repeated injection of sublethal amounts of the toxin to immunize dogs against fatal doses.

The parenchymatous organs spleen intestinal mucosa etc. and particularly the liver seem to be especially concerned in the production of the reaction against the toxin when dogs are immunized.

The extract of an immunized dog's liver properly handled will destroy the toxin in vitro.

It is believed that the intoxication observed in closed loops is quite similar to that existing in simple obstruction and that the same toxin is the essential agent causing it in each instance.

The discovery of the importance of absorption



from the mucosa even in drained loops leads one to think that the establishment of an enterostomy for drainage in clinical cases may not meet all the requirements for successful treatment.

It may be possible to develop a method of direct relief against the toxin as an auxiliary to the surgical relief of obstruction.

ET AL CASE

Spencer J. Carcinoma of the Small Intestine. J. Phila. 1914, 41: 2.

By S. R. Cynce & Mont.

The author presents a statistical review of sarcoma of the intestine and reports 2 cases, one a lymphosarcoma and the other a myxosarcoma. He states that the condition is very rare. Smoker, 1905, having found 23 cases of sarcoma primary in the small intestine. The condition is most common between the ages of 30 and 45 years, although a rather large number occur at an early age. There is a case in which the condition was present at birth. The lesion may occur in any part of the intestine, although it is more common in the ileum, occurring 32 times in 55 cases. In 101 cases 67 occurred in males and 34 in females. The condition is more common among the working classes and in a few cases has followed trauma to the gut.

Lymphosarcoma occurs in 2 chief types and a frequent source of bowel and mesentery are the seat of secondary growth. This type is the most malignant, the specific type tending to remain localized.

The malignancy of the tumor originates in the submucous tissues and may extend far along the bowel without ulceration. These may be single or multiple, ulcerating, or non-ulcerating.

The symptoms in the beginning are usually of an indolent nature. General abdominal pain is usually first noted, followed by loss of appetite, nausea and vomiting. Irregular bow movements and distention of the abdomen soon follow. As opposed to cancer the obstructive symptoms are not as marked and the disease runs a much more rapid course—the average being 4 to 5 months.

The treatment of this condition is surgical but in the general lymphosarcoma benefit has followed the administration of arsenic.

Goulet and Masson. Duodenal and Tumors of the Appendix (Tumeurs duodénales et appendicéennes). J. Chir. 1914, 41: 2.

Tumors of the appendix are rarely malignant. They are mainly discovered only on operation or at autopsy and have become generalized in only 6 per cent of the cases observed thus far. They belong to two types. They are either cylindrical epitheliomatous of the ordinary type or they are large tumors greatly analogous to the atypical epithelioma of glial origin. Recently Herdendorf and then Warshaw have shown that many of these tumors are of glial origin.

The authors study two personal cases of three small tumors of the appendix, neither of which gave rise to any special clinical symptoms. A histological description of the tumors is given which shows that they resemble glands with internal secretion rather than carcinomata. Masson had previously shown that throughout the intestinal mucosa generally there are special cells mentioned long ago and to which Ciacconi has given the name of argentaffin chromaffin cells. These argentaffin cells are scattered throughout the epithelium and have at their base an accumulation of granules which chromaffin cells yellow. They have another much more special property that of being in the metastable form an ammoniacal solution of nitrate of silver. These argentaffin cells have the value of glands with internal secretion. The granules contained in the cells of the tumors of the appendix had the same reddish properties as those seen in one of the cases these argentaffin cells had taken on the cylindrical form of the intestine and were arranged around a narrow lumen. The authors consider these tumors as hyperplasia due to the fact that a pure culture of the argentaffin cells of the intestine under these new conditions the cells become argentaffin so as to create the appearance of argentaffin, to what is found in hyperplasia of other glands with internal secretion, the suprarenal and parathyroid for example. These carcinoid tumors of the appendix should be considered benign tumors in spite of the infiltrating nature of their elements. They are only exceptionally malignant. In this and in the reduced property of their granules they resemble the argentaffin cells. These tumors do not pertain directly to the appendix. They may be found where the argentaffin cells exist in the normal condition and the carcinoid tumors that have been described all along the intestine seem to be in the same group with these ductless argentaffin tumors of the appendix. The specific silver reaction will show whether this opinion is justifiable.

J. Deaver

Hertogh. Appendicitis and Hypothyroidism (Appendicitis et hypothyroïdisme). Ned. Arch. 1914, 41: 2.

By Journal de Chirurgie

Fifteen years ago Hertogh presented a work to the academy on slight thyroid insufficiency which allied chronic benign hypothyroidism. He maintained that the thyroid secretion takes a part both in the formation and integration of the albumen in every organ of the body. There is not a single organ the body that is not influenced by it. The frequent hypothyroidism is explained by the great vulnerability of the gland. In the child it exhausts itself in the task of growth. In the woman it bears the fatigue of menstruation, gestation and lactation. It is very sensitive to all toxic microbic or hygienic influences. Moreover, when a unknown number of talents from our ancestors so that there are few individuals

who do not have a greater or less degree of thyroid insufficiency. This hypothyroidism ought to be taken into account always in duly practice just as tuberculosis and syphilis are.

Before the publication of this paper on benign hypothyroidism Hertoghe had called attention to the frequency with which adenoids and hypertrophied tonsils were found in conjunction with thyroid inefficiency.

Since 1904 Delacour has claimed that appendicitis often co-exists with tonsillitis and that they have a common cause in thyroid insufficiency. This is easy to prove either as Delacour did by taking cases of chronic appendicitis and examining them for hypothyroidism or by taking a series of cases with signs of hypothyroidism and examining the appendix in the great majority of these cases there will be sensitiveness to pressure in the ileocecal region. This does not mean that all of these cases will develop acute appendicitis but there is no guarantee that this will not occur and no one can tell when it may occur. Sometimes a few hours will transform a chronic appendicitis into an extremely serious inflammation. Hypersensitization of the region being demonstrated he advises operation. In the course of the past year the author has performed 126 appendectomies, 90 of them for chronic appendicitis. These 90 patients were operated on simply because they showed hypothyroidism and abnormal sensitiveness of the ileocecal region. He does not think the operation was useless in a single case. He observed the following lesions: (1) In the caecum. It was generally fixed deep in the iliac fossa by adhesions that were not very firm. It was often much congested and very vascular. These adhesions press up the anterior surface of the caecum; the form of transparent hyaline veils. In the most advanced cases they had passed over the appendix fixing it either to the caecum, the mesentery or the ileum. In the adult they were thick and vascular forming a reliable adhesive band interfering with the passage of matter through the large intestine. (2) The appendix especially in children was long, large and succulent. It was twisted around its mesentery sometimes used in hammock shape. It was generally filled with fecal matter. In the cases that were not diseased it was free and floating. Later it became progressively immobilized by the hyaline band. Under the microscope the appendix did not show a lesion as long as it was free and floating. The mucous membrane was intact and there were no lesions of the peritoneum.

J. DELOUR

Weiner J. Ileocecal Tuberculosis. A. S. G. Phila. 1911. 698. By J. G. Cynec & Obst.

Ileocecal tuberculosis affects both sexes alike and is more frequent in the parts of the testicular tract than in any other. Tuberculosis of the region and of the appendix is present more often than is generally thought according to the author

and the diagnosis is hard to make sometimes serial section alone will demonstrate the lesion.

In one of the cases of appendicitis the author reports a fecal fistula which took two operations to close. It was not until the third operation that tuberculosis of the caecum was diagnosed by serial sections.

Weiner is inclined to believe that at least a large number of these cases are primary and cites one case with a secondary tuberculosis of the lungs following an appendiceal abscess. The anatomical position is favorable to the disease as a pre-existing ulcer may be present.

The condition usually causes hypertrophy of all the layers and a partial stenosis the tumor is usually freely movable.

There are two forms: (1) The enteropertitoneal form which is difficult to distinguish from appendicitis. (2) The hypertrophic form this should be differentiated from neoplasms.

Lateral anastomosis is the operation of choice. Eight cases were reported. EUGENE CARY

Sorrel F. Chronic Intestinal Stasis. (La stase intestinale chronique). *Thèses de doct. Pa.* 1914. By Journal de Chirurgie.

In this work based on 20 cases four of which are unpublished Sorrel reviews the anatomy and pathological physiology of intestinal stasis. He shows that besides the general form due to ptosis atony of the intestine or certain varieties of megacolon there are localized forms that may be classified as follows: (1) Stasis by strangulation of the ileum—Lane's link. (2) Stasis in the caecum and ascending colon—Widnes caecum mobile Jackson's membranous pericolicitis. (3) Stasis caused by obstruction of the splenic flexure. (4) Stasis produced by an obstruction of the sigmoid—stricture partial megacolon mesosigmoiditis etc.

After reviewing the difference in symptom between stasis of the right colon and that of the left the former having a more serious effect on the general health the author studies the different methods of treatment of chronic constipation. The surgical methods are: (1) Resection of bands. (2) Fixation of the colon. This operation has been generally given up as a failure by German surgeons but French surgeons have obtained good results from it in mild cases of stasis of the caecum. All surgeons reject multiple fixation. (3) Intero-anastomosis. Sorrel gives preference to Lane's end-to-side ileorectostomy with plication of the rectosigmoid angle which is in reality a low ileosigmoidostomy. (4) Colectomy. Lane and Fauchet have used this operation but seem to have given it up on account of pain recurring of constipation and danger of occlusion.

It goes without saying that none of these operations should be performed until thorough medical treatment has failed when the patient shows symptoms of auto-intoxication and radiography repeated several times has shown that there is a material obstacle to the passage of feces. GASTON PIERCE



always been made. Operative or post-operative death 12 or 19 per cent. Living after one to six months 17 from one to two years 12 more than two years 6. The longest survival was five and one half years. C. LAMMSON.

Sippel A. A New Method of Operation for Intussusception of the Rectum in Women. (Fne n Operation mthode des Intussusceptions des M (darmes der Frauen) Zentralbl f d. ges. Gynäk. u. Geburtsh. d. Grenzgeb. 1904, 1, 297.

The case reported was an invagination of the pelvic portion of the rectum through the anal part as large as a small fist. The anterior wall being chiefly in of ed. As there is recurrence in 50 per cent of the cases after colotomy and resection of the intestine and drawing down of the flexure was too severe an operation for an old woman the following operation was performed. After reposition of the prolapsed posterior wall of the vagina and cervix were split. The pelvic part of the rectum was exposed and four longitudinal folds made in the rectal wall then the upper section of the prolapsed rectum was sutured to the posterior wall of the cervix. The vagina was resected and a groove the wall of the rectum being in luded after the making of a fifth fold. Finally there was transverse denudation of the posterior part of the anal portion of the rectum and longitudinal perineal suture involving two layers. POINCA.

Cané B. A Detailed Technique in the Abdominal Perineal Excision of the Rectum. (Un défilé de technique dans l'opération abdomino-périnéale du rectum) J. d. M. 1904, 1, 35.

By S. R. GYNER & OBST.

C. Né believes that in removing the rectum by the combined method the best disposition of the colon is to lower it to the perineum and fix it in the anus provided the anus is normal. The difficult point in this procedure is the management of the mesentery and the vessels contained in it.

The inferior mesenteric artery branches in various ways but only two of them are important. In the first the colic artery branches off 2 or 3 cm below the origin of the inferior mesenteric and the trunk of the sigmoid 2 or 3 cm below that. In the second variety the colic and the sigmoid branch off at the same place and may even have a common trunk. The ligation of the vessels for the purpose of lowering the colon should be made as high up as possible near the origin of the inferior mesenteric. In the first variety there is some question as to whether it should be above or below the origin of the colic but the author is inclined to favor the latter as it renders the lowering of the colon easier. In the second variety the ligation should be placed as high as possible above the common origin of the branches. In practice it is only necessary to expose the inferior mesenteric to its origin near the body of the third lumbar. If it gives off a collateral near its origin, ligate above or below it as may be decided upon. If

there is no collateral for the first 3 or 4 cm the ligation should be as near the origin as possible.

The ligatures to secure hemostasis will be only on the arteries supplying the part to be removed. The superior hemorrhoidal should be ligated as high as possible so as to remove the glands that may be involved as extensively as possible. But along the section of colon that is to be removed with the rectum they should be as near the intestine as possible. Practically the whole of the mesentery is preserved containing not only the marginal anastomotic arch but that formed by the spreading out of the branches of the inferior mesenteric. It is freed from its vertebral insertion and lowered with the mesentery. The author believes that this is preferable to preserving only the narrow band of mesentery containing the marginal arch for the latter is apt to be stretched to excess or even ruptured in lowering the intestine and moreover after the reestablishment of the circulation there may be an excess of pressure in the arch that favors gangrene.

The high ligation of the inferior mesenteric does not have any bad effect on the circulation.

ADREY GOSS

## LIVER, PANCREAS, AND SPLEEN

Pilot Jr. E. A Consideration of Certain Coexisting Lesions of the Gall Bladder and Kidney. J. Surg. 1914, 1, 679. By Surg. G. J. C. & Obst.

This emphasizes the point that diseases complicated by the presence of other diseases (as, for instance, tubercular cervical lymph nodes in the presence of syphilitic infections) or diseases occurring in one organ and affecting secondarily another organ (as for instance, the gall bladder on the kidney or vice versa) have not been thoroughly studied.

The writer has studied gunshot wounds of the kidney and has found a case of pistol shot wound of the kidney in the majority of which some additional viscera had been injured. The gall bladder is one of the most rarely injured of all and he was unable to find mentioned in the literature a gall bladder and kidney wound caused at the same time from the same shot. In the author's case the gall bladder also was perforated in two places.

The history of the author's case is as follows:

The patient, a man of twenty-five, was shot with a pistol of medium caliber and taken to the hospital. Examination revealed a small circular orifice in the upper right quadrant about one inch below the costal margin near the outer margin of the rectus muscle. There was marked hematemia together with the symptoms of peritoneal irritation both anteriorly and in the right flank. Four hours after ward an opening along the margin of the right rectus disclosed a large amount of bile in the peritoneal cavity. The gall bladder was very small of healthy appearance and presented near its fundus two openings through which the bullet had passed. The hepatic flexure of the colon was grazed. The right kidney was extensively lacerated and bleeding



a cancerous nodule which simulates a gall bladder and a normal gall bladder or there may be a cancerous nodule and also a gall bladder containing calculi or there may be a new growth of the calculous gall-bladder itself which has been transmitted to the parenchyma

All such cases are encountered but a minute and often repeated palpation ought to discover in these tumors some anomaly in form or size which does not agree with that of the gall bladder They are

apt to be too large too extensive And at present the complement fixation reaction and Wassermann reaction are valuable aids in differential diagnosis If the observation is carried on for a sufficiently long time there will generally be some sign that will prove gall stones if they really exist There will be apt to be concretions in the stools and examination of the faeces should be performed more generally and with more persistence than it usually is in the doubtful forms under discussion J DUMORT

## SURGERY OF THE EXTREMITIES

### DISEASES OF THE BONES, JOINTS, MUSCLES TENDONS CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Telford E D Leontiasis Ossea a Report of a Case and a Review of the Literature *Med Chronicle* 1914 LX 85 By Surg Gynec. & Obst

The author reviews the literature of the disease commenting on the rarity of the condition (less than forty cases having been collected) and reports a typical case He describes the disease as one of unknown etiology beginning early in life as a bony enlargement of the orbital region with most marked changes showing in the upper jaw The overlying soft parts are unaffected and no subjective symptoms appear until the pressure of the enlarging bones causes cranial orbital or nasal symptoms The disease progresses slowly with occasional periods of rest or even retrogression and terminates fatally from the pressure complications Pathologically the bones retain their normal contour but show marked thickening They are usually soft and porous showing cavities filled with pink gelatinous material Histological examinations show changes similar to those of osteitis deformans of Paget

The treatment is palliative operative relief of distressing pressure symptoms being the only measure used DeFOREST P WILLIAMS

Wenglowski R M Malignant Tumors of Bones a New Method in Conservative Operative Treatment *Lancet* Lond 9 4 LXVI 139 By Surg Gynec. & Obst

In malignant tumors of bone to aoid resection of the affected area Wenglowski sterilizes the bone to kill all the elements of the tumor and then allows the dead bone to remain in its natural connection with the healthy part of the bone so that no grafting is necessary Steam under high pressure is used secured from an ordinary autoclave or even a steam kettle as steam in the latter is formed under a pressure of 3 to 5 atmospheres A piece of thick walled rubber tubing one and one half to two meters long is attached to the spout of the kettle and to the other end of the tube is connected a piece of metal tubing perforated for the escape of the steam For sterilizing the front and side of the

bone the author uses a straight metal tube with terminal holes for the under surface a flat slightly curved tube with holes on the concave side The tumor in the soft parts is removed then that adhering to the bone is scraped off and the bone laid bare as for a resection The sterilization is then carried out the soft parts being protected by four layers of gauze upon which is placed a thin layer of sterilized asbestos and finally a metal plate the latter is used to protect against any hot water which might leak through

By experiment Wenglowski determined that a temperature of 55° to 80° C was necessary to kill the cells and bacteria To secure this temperature in the tibia it is necessary to apply the steam for three minutes for the lower jaw one and one-half minutes and for the condyles of the femur eight minutes

At the point of application not only the surface near the steam reaches the desired temperature but also the opposite side of the bone But along the bone it was found that 2 cm away the temperature was only 45 to 50° C and at 3 cm only 35 to 40° C so that the effect of the steam extends but about 2 cm laterally If the greater part of the bone is to be sterilized it must be done bit by bit but it is only necessary to apply the steam to one side of the bone (preferably the back) as the effect extends through to the opposite side as mentioned above

FRANK D DICKSON

Murphy J B Osteitis Fibrosa Cystica of Upper End of Femur *S & CL J B Murphy* 913 11 N 5 By Surg Gynec. & Obst

A male of 7 was admitted to the hospital on account of a deformity of the right thigh When the patient was nine years old he fell while running and landed on both knees striking harder on the right than on the left He was confined to bed and had sharp shooting pains in the right thigh to the knee much of the time After two weeks he was up and about but continued to have some pain for the next two months He did not have either chills or fever When he was fourteen, he tried to jump slipped and fell one leg extending forward and the other backward He was unable to rise and was carried home For the next two weeks he had acute pain shooting



dyles and cartilage of the femur change in shape of patella semilunar cartilages, crucial ligaments and inner side of the head of the tibia Microscopically the cartilage was seen to be replaced with fibrous tissue as was also the marrow in some places There was a marked productive osteitis in the tibia The synovia was thickened and consisted largely of granulation tissue with hemorrhages.

The second case showed destruction of the tibio-tarsal articulation with microscopic changes similar to the first case No treponema pallidum were found in either case W A CLARK

Rothschild M A. and Thalheimer W Experimental Arthritis in the Rabbit Produced with Streptococcus Mitis J F perim 11 Med 9 4 xix 444 By Surg Cyneec & Obst.

The authors have succeeded in producing arthritis in 30 per cent of the rabbits injected with streptococcus mitis The character of the arthritis is identical with that produced by micrococcus rheumaticus and the exudate in and about the joints is of the same nature as that caused by streptococcus rheumaticus The microorganisms can be demonstrated in a comparatively small percentage of cases In smears, they are almost always found intracellularly in cultures they can be recovered in about one third of the animals

Arthritis produced by other types of streptococci differs by reason of greater destruction of tissue by being more permanent in character and by the exudate containing large numbers of polymorphonuclear leucocytes The deduction of a distinct variety or species of streptococcus based upon the power to cause arthritis in rabbits is unwarranted C H BECKOLZ

Roberts, P W The Practical Management of Chronic Osteo-Arthritis Med Rec 9 4 lxxv 829 By Surg Cyneec & Obst

The author while acknowledging the value of the research work which is being done with the purpose of clearing up the etiology of chronic arthritis and the development of specific remedies contends that extreme refinement in diagnosis is not essential to favorable treatment

For working basis he suggests the division of chronic joint troubles into two classes (1) those due to or following a demonstrable infection and (2) those due to a vicious metabolism He puts especial stress upon the effects of traumatism and points out the importance of the immobilization of a affected joints observing that those joints which are easily put at rest undergo recession quickly while those more difficult of fixation recover more slowly Toxic and mechanical irritants act both locally and centrally the latter affecting nutrition of the joint tissues through alteration of the secretions of the ductless glands

In treating such cases first the discernible foci of infection should be removed local nutrition maintained

proved deformities that tend to put undue strain upon weight bearing joints should be corrected and as far as possible weight bearing parts should be placed at rest

He calls attention to the common fallacy of drug giving these patients with antirheumatic remedies such as alkalies salicylates and iodides whose principal effect is to disturb digestion He also cautions against restricting the diet too closely

He has had a very satisfactory experience from the use of thymus gland substance in doses of 10 to 15 grains three times a day Its action is slow and it should be continued for several months Some times thyroid gland with the thymus is useful in cases where there has been rapid increase in weight Recently he has used pituitary gland substance a 1 to 2 per cent solution being injected intramuscularly with striking lessening in pain and joint swelling

In addition to these agents he has found the diaphanous current given for the local effect of the heat produced to be of undoubted value Rest is of primary importance and the necessary orthopedic treatment should be instituted as needed for each particular case He reports eleven cases treated along these lines H W WILCOX

Werndorff R The Treatment of Tubercular Coxitis. 1m J Orth S 8 xi 3 367 By Surg Cyneec & Obst

The author calls attention to the fact that while in America the treatment of tubercular hip disease is still unsettled there is no longer any question at the Lorenz clinic in Vienna that ankylosing therapy is the most desirable The redressment of the old healed tubercular hip by intra articular operation causes in many cases a recurrence of the active process Rather than correct an adduction deformity by intra articular redressment the author advises subtrochanteric osteotomy The adduction deformity is the result of two things The destruction in the joint causes a rise of the trochanter above the Nelaton line thereby causing a relative lengthening of the peliotrochanteric muscles in addition these muscles are insufficient also as a result of atrophy The combination of these two conditions causes a dropping of the pelvis to the unsupported side when the body weight is supported on the affected leg alone so that the pelvofemoral angle is less than 90 degrees instead of more than 90 degrees as it is when standing on the normal leg alone

It was observed that patients of the remote Alpine regions who recovered from coxitis without treatment had a kylosed hips, but they had only a little atrophy and a strong functionally good leg with no sensitiveness on the other hand in those cases which have been protected by extension the leg is functionally unfit atrophic easily tired and although in better position than the ankylosed cases as long as apparatus is worn quickly develops the inevitable adduction deformity when use of the leg is begun without apparatus At the Lorenz clinic the





cases. The effect of injections of serum or vaccine on urethritis is very slight  
SCHULTZE

Brown W L and Brown C P Technique for Arthroplasty of the Shoulder-Joint *J Am Med Ass* 1914 Jul 1389 By Surg Gynec & Obst

This technique was first worked out on a cadaver and then applied to a clinical case. The case was that of a carpenter aged 44 who suffered from a stiff shoulder following a suppurative condition in the joint. The results of the operation were very satisfactory as mobility of the arm was restored.

In this operation a portion of the short head of the biceps four and one half inches long is utilized for a flap to interpose because it is covered by a more dense tendinous sheath than any other structure in the neighborhood and is correctly located anatomically to line the glenoid fossa and cover the entire head of the humerus  
ETOEVE CARY

Von Schatzeburg K. C.: Multiple Tumor Formation in the Region of the Wrist-Joint (Über multiple Tumorbildung neben in der Gegend des Handgelenkes) *Dtsch Wochenschr* München, 93  
By Zentralbl f d ges Chir u Grenzgeb

Cavernous angiomas are discussed with special reference to their ordinary localization and their coexistence with other kinds of tumors. In the case described a small tumor had appeared 12 years before on the right thumb. There was profuse sweating at its site and sensitivity to pressure. The tumor was removed in part. On admission to the hospital numerous tumors were found on the radial side of the right forearm and the palm of the right hand some of them soft and some of them especially on the thenar eminence hard. They were not especially painful on pressure. The skin over the tumors was bluish. The radial side of the right wrist the thenar eminence and the thumb perspired profusely. The glands of the region were not enlarged.

On operation tumors were found on the tendons sheaths of the flexor carpi radialis flexor pollicis longus and abductor pollicis longus. They were freely exposed and removed. One which penetrated very deeply was located on the capsule of the wrist joint. One was firmly adherent to a nerve. The tumors and the surrounding tissues were vascular and on the flexor side of the right forearm above the wrist joint there were varicose veins. The skin here was moist also on the radial side a similar occurrence having been recorded only once in the literature. The ulnar side was almost dry. The right thenar eminence was somewhat atrophic. More tumors could be felt on the surface of the hand above the tendon of the flexor carpi radialis. A very small tumor as large as a pea which was certainly a recurrence was found at the boundary between the distal and second phalanx of the right thumb. The glands were not enlarged. Some of the tumors were cavernous angiomas others neurofibromata.

FATKE LOEB

Grant T P and Stewart M J On Myeloid Tumors of Tendon Sheaths with Report of a Case *Glasgow Med J* 1914 LXXX 333

By Surg Gynec & Obst

Sarcomata of the tendon sheaths are found most commonly between the years of 15 and 40. Trauma probably plays an important rôle inasmuch as the hands are most commonly affected—87 per cent of true myeloid tumors occurring on the hands and most of these on flexor tendons.

The myeloid type remains more localized and varies in shape according to surrounding structures while spindle and round celled tumors are more apt to spread. The chief early diagnostic features are slow-growing painless freely movable masses under the skin with little interference to tendon motion. Microscopic examination however is always required for exact diagnosis.

As to treatment Tourneux's conclusions from which the above data are taken are (1) Local removal without interference of the tendon, if it is an early growth especially if myeloid (2) wide dissection or amputation if round celled and extensively infiltrated (3) amputation if recurrence takes place no matter what kind of growth it is.

The author reports a case of tumor following puncture of the finger by a knitting needle which was shelled out but recurred twenty months later requiring amputation. The tumor removed was yellowish in color and solid throughout. The histology is discussed and a term suggested by Bellamy myeloid endothelioma applied.

H W MEYERBERG

## FRACTURES AND DISLOCATIONS

Murphy J B: Fractures in the Neighborhood of Joints *J La ced* 914 xxv 86

By Surg Gynec & Obst.

The author calls attention to the frequency of Volkmann's contraction following a too tight bandage on the forearm in the treatment of fractures. The mischief is done in the first forty-eight hours and the forearm may be permanently ruined. To avoid this padding four inches thick should be put on between the wrist and the elbow and instructions left that the bandage is to be cut if the hand swells.

For fracture of the condyles the arm should be put up in full flexion and not disturbed for passive motion for two and a half weeks for children three weeks for adults. Passive motion too early when it causes pain produces laceration and results in extensive cicatricial formation with a consequent ankylosis or a limitation of motion. The best way to secure a good position after condylar fracture is by nailing on the fourth or fifth day. The bone is so superficial that only a small incision is necessary. An eight or ten penny nail should be used. This prevents the friction which produces callus and the less the amount of callus the less the likelihood of production of ankylosis. After thus nailing the arm may be put in a sling with no other dress.

ing For fracture of the olecranon a single nail at the proper angle is better than plating or wiring. The author reports a variety of cases of fracture at the elbow. In one case he resected part of an anteriorly displaced upper fragment of a supra condylar fracture to allow flexion of the forearm. In another case he brought the lower fragment forward and fastened it with a Lane plate to restore mobility. In another he detached a displaced condyle completely and nailed it back in proper place with a good result.

For fracture of the humerus near its head the fragments should be adjusted by open operation and nailed in position. In some cases the head had to be taken out, reinserted and nailed in good position. In Pott's fracture there is a crowding of the astragalus upward between the malleoli. To prevent this position becoming permanent the foot should be put up in extreme adduction. If the fracture is above the articular surface of the tibia—and kept there for at least six weeks to permit healing of the ruptured interosseous ligaments. Impacted fractures of the upper end of the tibia are usually called sprains and overlooked. Fractures near the hip-joint usually require nailing. In one case the head was found detached and dead but was nailed in place and showed a good result four years later. If there is a fracture of the neck of the femur there should be 25 to 35 pounds extension with superlative abduction of both legs. W. A. CLARK.

Erving, W. G. Diagnosis and Treatment of Joint Fractures. *J. M. S. M. J.* 1914, xix, 85.  
By Surg. Gynec. & Obst.

Joint fractures are exaggerated sprains and by use of the X-ray many more cases are now being recognized as fracture sprains. The hemorrhages etc. following, and the absorption of the fibrous elements, undisturbed tend to limit joint and muscular function. In sprained joints support without interference of normal function is now accepted in preference to complete immobilization and disuse.

With joint fracture and joint sprain, replacement of the fragments immobilization for the shortest possible time and active mobilization to prevent adhesions, constitute the treatment.

The author emphasizes the value of X-ray examination. A temporary adjustment and splint may be used and three days later under possible improved conditions a nutritious ointment or an ether anesthetic is given and a better reduction performed. The joint is manipulated to clear the articulation of bony spicules and put it in a position of greatest value in case of fixation. If possible neighboring joint should be left free, as stiffness commonly results from too complete fixation.

Plaster of Paris splint and well padded is preferred as splint material because of its adaptability and lightness. From four to five weeks in Collie's, and six to eight weeks for Pott's fracture is no longer to be considered and to continue immobilization

longer than seven to ten days invites stiffening. Hot air massage dressings of hot cloths and baths are recommended. Manipulation under anesthetic should be given at the end of a month. Weight bearing in ankle fractures cannot be borne under five weeks at the earliest.

H. W. MARZARRO

Fiévez, J. Intracapsular Rupture of the Long Head of the Biceps. Its Relation to Arthritis of the Shoulder Joint. (*La rupture intracapsulaire du tendon du long biceps brachial ses rapports avec l'arthrite sèche scapulo-humérale*). *Arch. et de la Par.* 1914, 129.

By Journal de Chirurgie

This accident generally follows traumatism due to lifting a heavy load there is a cracking sound, severe pain and loss of function followed by ecchymosis of the anterior surface of the arm. It is characterized by (1) a swelling of the long head of the biceps (2) the tendon can be felt to an abnormal degree under the anterior edge of the deltoid (3) the tendon is placed more or less under tension when the biceps contracts.

Fiévez maintains that this symptom complex is produced only by intracapsular rupture of the tendon, not by elongation of the tendon, inward dislocation or pseudohernia of the muscle. He believes it is a relatively frequent affection. He found it once in 45 examinations of hospital patients, and in the dissecting room once out of ten arms dissected. Besides the acute surgical form there is a chronic medical form in conjunction with arthritis without effusion on the articulation between the scapula and humerus. He reports four cases.

The rupture is progressive the process of destruction passing through various stages. The joint is severely involved there is arthritis without effusion, ecchondroses, osteophytes and villousities within the joint. The localization of the arthritis determines the seat of the lesion in the tendon later after the tendon has ruptured the arthritis continues its work of destruction. The rupture of the long head of the biceps is one of the results of arthritis. This process is not confined to the shoulder-joint but may be observed in other joints.

It is important to know the part played by arthritis of the shoulder joint in rupture of the tendon when passing judgment on loss of function following industrial accidents. Fiévez concludes that from the medicolegal point of view there are three possibilities: (1) The traumatism is the sole cause of the rupture. (2) The traumatism is insignificant and the arthritis is the sole cause of the rupture. (3) Traumatism and arthritis have acted together to produce the lesion. But if it can be shown that up to the time of the accident the injured man could perform all his work and that after the accident he could not work, the judgment will be apt to be in his favor.

In conclusion the author brings up the question of whether abnormal insertions of the long head of

the biceps are congenital lesions or malformations due to intracapsular rupture. The treatment is surgical only in exceptional cases. The thing to be treated is the arthritis which is the cause of the rupture and the pain.

BERNARD DESPLAS

**Widdon J. Spontaneous Dislocation of the Hip**  
*Am Orth A Phila* 19 4 June  
 By Surg Gynec & Obst

This paper is an argument for the use of the term spontaneous dislocation for that of congenital dislocation which has been used up to this time.

Some femoral heads may never have been in their sockets some may have slipped out before birth and others at birth but it is a known fact that some appear to be out at birth and later on become secure and in place others slip out after birth and before the child walks others remain in place until the child has walked for some time and then go out without recognized traumatism as late as the fourteenth year.

Cases were reported and lantern slides from radiograms shown illustrating these facts also slides were shown illustrating the case of a man 54 years old who had never had any trouble with his hips, but whose sockets were so shallow that they embraced not more than two-thirds of the femoral heads.

### SURGERY OF THE BONES, JOINTS ETC.

**Thomas, H B. Bone-Transplant** *S & Gs* 6-  
*Obt* 9 4 xiv 530 By Surg Gynec & Obst

The author advocates the use of bone supports taken from the patient where possible. The Lane plate is thought to cause irritation and a tendency toward suppuration very frequently regardless of the Lane technique. The per cent of unsuccessful cases is taken from one hospital only and is much higher than a general study of several hospitals would probably show. Some of the uses now made of auto bone plate are enumerated among them being:

To plate fractures in long bones, thereby diminishing the possibility of suppuration and a second operation in comparison with the Lane plate.

2 To supply congenital deficiency in long bones  
 3 To retain corrected or near corrected position in scoliotic spines

4 To replace resected tubercular joint

5 To hold the overcorrected talipes equinovarus foot in position by placing a wedge of bone taken from the tibia in the groove made by the overcorrected and by hip pegging as suggested by Albee.

6 To supply loss of bone following osteomyelitis.

7 To replace joints resected for cyst or malignancy using strips of tibia taken from the same patient as in Halstead's shoulder case not yet reported.

Only cases under the headings 2 3 and 4 are considered. A case of auto bone-plate is men-

tioned with the opinion that the use of the bone-plate will tend to displace the use of the steel plate.

The replacement of a congenitally absent meta carpal and the replacement of twelve inches of resected knee joint with ten inches of the patient's tibia placed in tuberculous material are reported.

**Allen H. R.: External Bone-Plating Preliminary Report** *J Ind & St M Ass* 19 4 11 206  
 By Surg Gynec & Obst.

Under this title the author describes his technique in the operative treatment of fractures, which in brief consists of an external plate made of a low melting alloy composed of a combination of metals. This alloy melted over warm water is poured into a trough composed of rubber tubing or forms of any convenient material into which pass the external ends of the nails which penetrate the bone fragments. The nails pass entirely through the bone and are placed at diverging angles to each other.

He claims for his method better fixation than with other well known methods of external fixation with absence of pain and infection. He never uses plaster of Paris for splints but makes his splints of wire and adhesive plaster.

H W WATCOCK

**Albee F H. The Inlay Bone-Graft in Fresh Fractures.** *N Y M J* 19 4 21 1  
 By Surg Gynec & Obst

Albee considers that the results of inlay bone-grafting in old ununited fractures have been so good that the same methods applied to fresh fractures should be equally successful.

He obtains the graft used from the fractured bone instead of from the crest of the tibia by making the segment removed from one fragment twice the length of that removed from the other if possible five and one half inches for the long and two and one-half inches for the short segment. With a sharp instrument the periosteum is stripped from the area from which the short segment is to be removed to insure the removal of the osteogenic cells and the gutter started by twin saws adjusted to cut the desired width. The long segment is outlined in the same manner but the periosteum is removed from only the distal half of the segment. The parallel saw cuts are continued to the medullary cavity by a single saw held at such an angle as to cause the saw cuts to converge as the cavity is approached thus preventing the graft from dropping into the medullary cavity when forced into place.

The breadth of the saw cuts is sufficient to allow the graft when placed in position to sink below the level of the gutter and in the margin so left dowel holes are drilled obliquely outward into which dowels made from the split up short segment are driven in this way the inlay is held firmly in place. The stripped back periosteum above and below is drawn over and sutured the unfilled part of the gutter being left to fill up with new bone. The soft parts are closed in the usual manner and a plaster of Paris dressing applied.

FRANK D DICKSON

**Brunetti C. Bone-Grafts (Les greffes osseuses)**  
*Ga d n 1914 x<sup>3</sup> 3* By Journal de Chirurgie

The author describes the case of a man of 73 with a sarcoma of the humerus. The humerus was resected then a fragment of the fibula 15 cm long was removed the periosteum being preserved as well as possible the two extremities were pointed and introduced into the ends of the humerus. There was no suture of the bone. Drainage was established and the shoulder and elbow immobilized. Radiography a month later showed the graft to be normal. Two weeks after this, while the arm was being massaged the lower end of the graft became detached from the humerus and a second operation had to be performed to fix it in place. At this time the periosteum was found normal and the fibula was adherent to the neighboring muscles. Four months later the patient was using his arm normally with only a slight decrease in muscular force.

This case seems to justify the belief that the transplanted fragment continues to live—an opinion that is at present disbelieved by the majority of authors. P. DE RIO HANCO

**Gallie W. E. and Robertson D. E.: The History of a Bone-Graft** *Tr Am Orth A Phila 1914 June* By Surg Gynec & Obst

This paper consists of a report of experiments on animals conducted with a view to determining the successive histological changes which occur in bone transplants. Pieces of bone an inch and a half long were removed from the radius of dogs and carefully replaced and held in position by stitching the periosteum over them with fine catgut. The specimens were recovered at the end of one, two, three and eight weeks.

At the end of one week microscopical examination showed that the graft was quite dead, there being no circulation present and no living cells.

At the end of two weeks the circulation showed signs of being reestablished by the growth of new blood vessels into the cracks and open haversian canals and along the edges wherever a haversian canal was cut transversely. It was seen to contain new blood vessels. The lacunae were empty.

At the end of three weeks the circulation was completely reestablished and the graft firmly united to the rest of the radius by new formed bone. Everywhere around the outskirts could be seen proliferating osteoblasts which were invading the graft spreading into the cracks and open haversian canals along the new formed blood vessels. In many places these osteoblasts were laying down new bone. Along the edges, wherever haversian canals were cut transversely, they were seen to contain blood vessel surrounded by osteoblasts and new bone. Elsewhere the graft was devoid of cells as in the one- and two week specimens. Wherever invaded by osteoblasts the graft was becoming cancellous.

At the end of eight weeks the graft was cancellous throughout there being very little dead bone left

its place having been taken by trabeculae of new bone laid down by the invading osteoblasts.

In another experiment before the graft was replaced half of it was completely enveloped in its foil. The specimen was recovered at the end of eight weeks and sectioned longitudinally. In the tip of the foil covered extremity the bone was quite dead and as solid as when placed there although the circulation had been completely reestablished. Nearer the middle the same picture appeared as in the three weeks graft described namely invasion with osteoblasts and the laying down of new bone. At the uncovered end the picture exactly resembled the eight weeks graft in being cancellous and made up entirely of new formed trabeculae. Thus this specimen showed all stages of the history of a bone graft.

In another series of experiments the grafts were boiled for five minutes before being put into position. The sections showed exactly the same series of changes as described above in the unboiled grafts. In a third series heterogeneous grafts were employed and again the same series of changes were demonstrated. In all cases the grafts were solidly united to the dog's radius and the rapidity of replacement by new bone appeared to depend solely upon the relative hardness of the graft.

These experiments demonstrate that following this successful transplantation of small bone grafts the following changes occur:

1. Death of the graft
2. Revascularization of the graft
3. Concomitant absorption of the dead bone and production of new bone by bone-cells which invade the graft along the route of the new blood vessels.

These experiments show no difference in the value of fresh and boiled bone as transplants and no difference in the gross and histological changes incident upon the introduction of autogenous and heterogeneous bone grafts of similar density.

**Brougham R. J. and Ecke A. C. Preliminary Report on the Treatment of Fractures by Fixation with Animal Bone-Plate and Bone-Screws.** *Surg Gynec & Obst 1914 xviii 637* By Surg Gynec & Obst

The authors report successful cases of fixation of fractures with absorbable bone-plates and bone-screws. The fixation was secure and efficient in all cases and perfect union with abundant callus formation resulted. It was found a non-union when plated with the device that callus formation was stimulated and not retarded.

The device and special instruments for the plating make a mechanically simple operation. The technique of operation is that of Lane. The bone used for making the plates and screws obtained from government-inspected cattle. The material is deprived of its animal matter and bleached and the plates are made a thin as is consistent with strength. The plates which are five in number constitute

the working set each one being designated by a number No 1 the smallest No 4 the largest

The holes in the plates are previously drilled and threaded. The plates are scrubbed with brush soap and water sterilized by boiling for two hours, and placed in formalized alcohol. Before being used they are placed in normal salt solution from which they are taken at operation.

In operating the fracture is exposed and the bone-plate selected is placed over the fractured ends and held there by the pressure of long forceps in the hands of an assistant. The operator proceeds to drill the underlying bone beginning at the hole at one end of the plate. The hole drilled is threaded with tap and the bone screw mounted in the holding chuck is screwed into place securing one end of the bone plate.

The other end is treated likewise then the intermediate holes. The projecting ends of bone-screws may be sawed off with a metacarpal saw or the special bone clipper may be used.

The wound is closed dressings are applied and fixation is reinforced by the application of a plaster cast. The cast is fenestrated in twelve days the sutures are removed and the cast is strengthened if needed. It remains in place eight weeks and is then removed in normal cases it is not reapplied.

articular fracture recovered completely with perfect functional results.

The second case was that of a man of 50 who had an oblique fracture of both bones of the left leg with shortening pronounced edema and glycosuria.

The author saw the patient one and one half months after the fracture which had been treated by immobilization. Examination showed torsion of the leg very defective coaptation no callus complete loss of function pain and glycosuria. Under novocaine anesthesia one of the extremities of one of the fragments of the tibia was resected which did away with the overlapping but left a gap between the fragments which was filled in with a piece of bone removed from one of the resected fragments. Healing was by first intention. Thirty days later there was a well-defined callus and at the end of 50 days fixation and consolidation were complete.

The author emphasizes the good result in such a seemingly hopeless case. He insists on rigorous asepsis and no sutures. Hemostasis is accomplished by crushing the vessels the muscles and aponeuroses heal without suture and the skin wound is held together by clamps. The limb is immobilized for 12 to 13 days with metallic splints followed by massage and mobilization. P DE RIO-BRANCO

Benjamin A. E. The Operative Treatment of Fractures, Demonstrating the Use of Steel Plates for the Correction of Bad Fractures. *J. La et* 914 21 270 By Surg. Gynec. & Obst.

The imperfect and sometimes disastrous results following attempts at bone-plate may be due to the improper application of splints selection of the wrong plate screws too small for the drilled holes a stiff bone impaired vitality or infection. The author reports fourteen cases of fracture which he treated by open operation. He used Lane plates in eight of these in four the plates were subsequently removed in two he reports union formation persisting several months. W A CLARK

Reynaldo dos Santos: Operative Treatment of Simple Fractures (*Traitement opératoire des fractures simples*). *Méd. alem.* Lb 6 914 214, 99 By Journal de Chirurgie.

During the past two years Reynaldo dos Santos has operated on 30 simple fractures applying either simple screws or screws with plates or simply reducing the fracture through the incision. He has used Lane's plates in fractures of the humerus the fibula the femur the tibia the physis of the tibia and the malleoli etc.

Among the cases there were two especially interesting ones. In one there was separation of the anterior tuberosity of the tibia by sudden muscular contraction in a young man. The patella was pulled upward and the fragment of the tuberosity pushed down. The operation consisted in replacing the fragment with the aid of two plates. The severe

Soule R. E.: A Further Consideration of Arthrodesis in the Treatment of Paralytic and Other Acquired Deformities of the Foot. *Tr. Am. Orth. Ass. Phila.* 1914 June

By Surg. Gynec. & Obst.

In cases of permanent paralytic valgus of the foot in rigid and relapsing flat foot the astragalus furnishes a secure anchorage for arthrodesing the astragaloscaphoid articulation after the deformity is corrected.

The astragalotibia articulation is a broad ovoid hinged joint and being nearly horizontal gives a broad weight bearing surface whereas the astragaloscaphoid articulation being a ball and socket joint and placed as it is so that the articulation is almost perpendicular the strain of weight bearing and muscle action produces the maximum of deformity at this point. The astragalus remains in a normal relation to the tibia and fibula. Thus ankylosis produced at the astragaloscaphoid joint gives a stable non-relapsing foot without the loss of any necessary joint and without material mutilation to the foot. The muscle power already present is preserved and given an opportunity to develop.

Through an incision about one and one half inches long parallel to and to one side of the tendon of the anterior tibial muscle the joint is exposed and with a curved gouge made to conform to the ovals of the joints the cartilages are removed from the head of the astragalus and scaphoid articulation. Correction of the foot forces the denuded surfaces together where they are held by a closely fitting plaster of Paris cast for six weeks.

## ORTHOPEDICS IN GENERAL

Marshall H W and Langnecker H L. Some Hygienic Tests Applied to Orthopedic Conditions. *Boston M & S C J* 1914, clxx 75

By Surg. Gynec. & Obst.

The object of the author was to provide a good basis for the recording and study of the many difficult cases of arthritis which come to the orthopedic surgeon. He gives a chart whose base line marks the normal average of such indices as height, weight, blood pressure, hemoglobin, amount of urine, amount of food reflexes, etc. Variations from this normal average line in an individual case are graphically shown by plotting a curve which goes above and below the normal base line in direct proportion as the indices in the individual being studied vary.

The chart should be very useful in keeping the attention of the patient and physician on the abnormal ties and in showing clearly the improvement resulting from treatment. FARNBERG C. KID 22

Bingham A H: Orthopedics in General Practice. *North Am J Homoeop* 1914, clxxi 211

By Surg. Gynec. & Obst.

Bingham emphasizes the fact that orthopedic conditions are first seen by the general practitioner and that he should be able to recognize the conditions and institute proper treatment. Favorable prognosis in orthopedics depends upon such early diagnosis and treatment.

The various conditions which the general practitioner should recognize and which will result in severe deformity if not treated early are briefly discussed.

Weak foot with its vague aches and pains of the foot and leg, and with pronation of the foot but no flattening of the arch should be treated with exercises to strengthen the tibialis and with proper shoes. Acute cramp-like pains in the anterior part of the foot due to the breaking down of the transverse arch can often be cured by a felt pad under the head of the third and fourth metatarsals.

Special mention is made of the necessity of a thorough examination of the whole body and of exercises for the correction of postural habits and the strengthening of muscles.

Rickets is another condition which yields quickly to early treatment and which will produce marked bony deformities if neglected.

Tuberculosis is also first seen by the general practitioner and much of the deformity and after treatment can be prevented if the body and limbs are held in proper position during the early stages by splints etc. It is massage and electricity are useful in stimulating the paralyzed muscles.

Joint tuberculosis should always be suspected if a child limps and complains of more or less persistent joint pain. The prognosis is in direct relation to the early beginning of treatment.

DeFOREST P WILLARD

Lovett R W. The Causes and Treatment of Chronic Backache with a Consideration of the Diagnosis of Sacro-Iliac "Relaxation." *J A M A* 1914, lxi 1615. By Surg. Gynec. & Obst.

Chronic lameness in the back is usually attributed by the laity to either kidney disease or to uterine troubles. Considering fundamental facts, it must be remembered that the condition has to do with a jointed weight bearing upright column maintained in balance by muscular effort that the load is mostly anterior that the sacro-iliac joint which transmits the weight to the pelvis and thence to the legs is only very slightly movable more so in woman than man, and in front of it lies the lumbosacral cord and plexus that the spinal column is a structure of about one hundred articulations with intricate ligaments stronger on the posterior than on the anterior side.

Classifying on an etiologic basis three varieties of backache can be clinically identified viz: (1) The chronic ache which may be due to a forward bent position which the patient habitually assumes to relieve displaced and tender pelvic organs. (2) Trismus resulting in chronic irritability. (3) Arthritis of the spine. In addition to these there is a large percentage of unclassified cases relative to the cause of which there is still sense of opinion. Two theories are held that of the static origin assuming that there is a forward displacement of the center of gravity imposing undue strain on the posterior musculature of the trunk and that of sacro-iliac strain or sacro-iliac relaxation. As to the latter theory it is of such a nature as to admit of definite proof or refutation by roentgenoscopy or autopsy and no such evidence is available to establish such a condition as a clinical entity. The therapeutic measures employed by the adherents to this theory such as straps of adhesive plaster on the movable skin with the idea of immobilizing the joint and preventing the bones sliding by each other are in themselves if they give relief evidence that no such condition exists. For it is not to be believed that such strapping even with encircling webbing or plaster of Paris will permit a shifting thru of 75 to 125 pounds at every step.

The static theory on the other hand cannot be proved or disproved by roentgen ray or pathology. The symptom fit this theory and moreover the strapping indicated by adherents of the static theory could easily afford relief to the static cases by cutting as an anular ligament due to the gluteal muscles. These static cases are due either to lateral anteroposterior defects of balance.

In an analysis of eighty three private cases the author classifies them as follows: Lateral defect in balance 10, anteroposterior balance 31, pelvic & traumatic 20, arthritis 15, acute lumbago—too acute to classify.

Treatment of the pelvic cases usually means gynecological operation but it is wise to attempt mechanical measures first. Those due to arthritis of the spine require fixation of the spine and this is

best done by means of a canvas or leather corset reinforced proportionately to the severity of the case. Traumatic cases also require fixation. For lateral defect in balance the pelvis should be leveled by building up the sole and heel of the shoe on the proper side. In cases with defective antero-posterior balance an effort should be made to throw the center of gravity backward. This is done by raising the heels of the shoes and by means of the therapeutic corset. This corset should be tightest around the pelvis at the bottom diminishing in pressure towards the top where it should be loose making no pressure on the back at this point and it should have a straight front. W. A. CLARK.

**Pollock H. C.: Some Common Facial Deformities from an Orthodontic Standpoint. 1st of J. 914 xii 576 By Surg. Gynec. & Obst.**

The author describes deformities caused by malformed jaws and teeth such as "squirrel mouth" and undershot jaws and states that they can be absolutely cured. This is brought about by an apparatus made up of small platinum springs adjusted to the mouth by means of the teeth and made to exert slow gentle pressure. This causes the tissues to respond and grow in the direction in which the pressure is applied.

Pollock shows photographs of 4 such cases before and after treatment lasting from one to two years, with perfect results. EUGENE CARY.

**Roth P. B.: A Case of Congenital Defect of the Ulna. La. d. Lood. 94 clxxv 1457 By Surg. Gynec. & Obst.**

The author's case a girl of 7 years showed an absence of the lower two thirds of the ulna together with three digits a dislocation forward and upward of the upper end of the bowed radius on the humerus. Two digits the thumb and little finger were present. The hand consisted of the thenar and hypothenar eminences and was deflected ulnarward to a right angle. The left humerus was one inch shorter than its fellow.

The elbow seemed to have good power and motion the hand could be supinated but from full supination only 90° of pronation was possible possibly due to the curved radius. There was about normal wrist and finger motion.

Kummel's classification is given and reference made to Wierzejewski's paper in 1910 when only 2 cases of this kind were recorded. An interesting diagram and x-ray are published with the article. H. W. MEYERSON.

**Packard G. B.: The Management of the Convalescent Stage of Hip Disease. T. Am. Orth. A. 11th. 94 J. By Surg. Gynec. & Obst.**

The author emphasizes the following points: Importance of the subject duration of treatment which varies according to the results of the

individual time of diagnosis and efficiency of treatment importance of x-ray findings as a guide to the question of further protection of the joint prolonged care required in many cases that are apparently free from activity the cause of relapses the question of deformity the value of motion and its interpretation in many cases apparently arrested after long and serious involvement and the significance of adduction and abduction in the late stage of hip disease not always recognized.

The conclusions are:

- 1 Treatment is discontinued many times when the disease is active.
- 2 The deformity should be corrected if possible without trauma to the joint.
- 3 The x-ray findings are very valuable and pictures should be taken at frequent intervals.
- 4 The joint should be protected and the patient kept under observation as long as there is the slightest indication of disease regardless of subjective symptoms or expenditure of surgeon's time.

**Geist E. S.: Supernumerary Bones of the Foot — the So-Called Tarsalia. T. Am. Orth. A. 11th. 94 J. ne. By Surg. Gynec. & Obst.**

The author reports a roentgen study of the feet of one hundred individuals who have never presented any foot symptoms.

The studies of Pfützner and Dwight and others have shown that some of the supernumerary bones of the foot are of exceedingly frequent occurrence such for instance as the os trigonum the os peronei and the os tibiale. The studies of these researchers were confined to dead house material and it was not known whether the subjects had ever presented foot symptoms or not.

Since the advent of radiography the knowledge of these bones has become important on account of the fact that they are frequently mistaken for fractures. It is of interest therefore to ascertain whether these various supernumerary bones occur as frequently as is indicated by the statistics given by the authors above mentioned.

This x-ray study of the bones of 200 normal feet almost exactly corroborates the statements of Pfützner and Dwight. The following are the results obtained in this study:

Os trigonum	87
Os peronei	77
Os tibiale	14
Os vesalii	17
Accessory calcus	27
Os intermetatarsum	27
Os intermetatarsal	Indefinite

Knowledge of these supernumerary bones is of importance as they have frequently been mistaken for broken-off pieces of tarsal bones — the literature in no country being free from errors of this sort. It is further necessary for the medicolegal expert to be acquainted with these normal anatomical variations.



## SURGERY OF THE SPINAL COLUMN AND CORD

Adams, Z. B.: The Causes and Their Relation to the Treatment of Lateral Curvature of the Spine. *Boston M & Surg J* 1914 clx 786

By Surg Gynec. & Obst

Several years ago Max Boehm called attention to the numerical variation of the spine as a frequent cause of scoliosis. It was especially the asymmetrical sacralization he considered as most important. In a former paper based upon the examination of skeletons Adams came to the conclusion that abnormalities of the lumbosacral articulations are probably of much greater importance in this direction than asymmetrical sacralization. This conclusion has been brought into greater prominence by an extensive study of X-ray plates of patients with lateral curvature. So far in 22 unselected cases, abnormalities have been found which are considered to be the cause of the scoliosis except in one case of infantile paralysis where no bony abnormality was noticed. The reason why scoliosis most frequently develops between 10 and 14 years is that at this age the anterior lumbar curve becomes constant and the weight of the upper trunk is increasing very rapidly. The increased tipping throws greater strain on the articular processes and as the angle of inclination increases the horizontal thrust becomes more vertical and the strains tend to unite. Hence when these processes are defective scoliosis develops.

In discussing therapy Adams compares critically the methods of Abbott and Forbes. Both methods give good results in some cases and fail in others. Neither of them considers the true cause as seen by Adams who suggests operative treatment if conservative methods fail or even before correction is attempted. Such operation should strive to remove bony obstacles or lock together defective articular processes. From a rational point of view children with lateral curvature should be taught to sit with a rounded lower back and to stand in the flat back position for this will keep the sacrum under the spine. C. H. BROWN

Galloway H. P. H.: The Treatment of Paralytic Scoliosis by Bone-Grafting. *Tr in Orth As Phila* 94 J

By Surg Gynec. & Obst

Galloway reports three cases of paralytic scoliosis treated by Albee's bone-grafting operation. He draws attention to the peculiar difficulties of treating scoliosis due to paralysis of the muscular guy ropes which normally maintain the erectness of the spine. In examining such a case if the patient be first placed face downward and then examined sitting or standing, the extremely vicious effect of the supracumbent weight of the head and shoulders is easily seen. He is constant recumbency is apt to be recommended but as most cases occur early in life this is but a temporary solution of the

problem and the physician is driven to attempt mechanical support which is relatively futile.

The author first tried bone-grafting for this condition in July 1913 on a boy of six years with a severe paralytic scoliosis together with marked paralysis of both lower extremities. The spinal distortion had been rapidly growing worse. Inasmuch as the severe deformity almost disappeared when the child was placed face downward it seemed rational to consolidate the area of greatest deformity while the child was in this position thus making it impossible for that part of the spine to bend sideways or twist when the erect posture was resumed. Through a long, curved incision the dorsolumbar region of the spine was exposed and the spinous processes of nine vertebrae were split anteroposteriorly into lateral halves. While assistants made traction on the left arm and leg to help obliterate the deformity a long heavy bone graft from the tibia was inserted into the cleft in the bones and securely sutured in position. A recumbent position was maintained for ten weeks followed by the wearing of a removable corset. Very marked improvement has been maintained as is shown by photographs taken before the operation and ten months later.

A second case was less favorable for operation, and as the case was not followed up the result is not known.

The third case a girl of five had complete paralysis of both lower extremities and so much distortion of the dorsolumbar region that even when recumbent there was great apparent shortening of the right lower extremity from tilting of the pelvis, which was overcome by preliminary traction for two weeks on a double Thomas frame. After operation the attempt to continue the necessary traction was largely defeated by the formation of a pressure sore on the perineum because of this the spine became rigid while the pelvis was tilted and the result was disappointing. Had the preliminary traction been kept up for a much longer period before operation so as to thoroughly correct, the result would probably have been better than in either of the other cases.

Having behind him the experience gained in these three cases the author feels justified in recommending further trial of the operation, but cases should be selected with the greatest care the operation being reserved for cases of paralytic scoliosis where the deformity is increasing but the spine is still flexible and shows marked lessening of deformity in the recumbent position. The operation is applicable to adults as well as children. The unknown effects of growth on the grafted region of the spine and the fact that years must elapse before the ultimate result of the operation can be known, are frankly recognized.

Forbes A. M.: Criticism of the Paradoxical Rotation or Physiological Treatment of Scoliosis. *Tr Am Orth As Phila* 1914 June. By Surg Gynec. & Obst.

Forbes has demonstrated by pathological specimens that scoliosis is not a deformity of the spine alone but of the trunk and especially the thorax.

There are two kinds of scoliosis: (1) Physiological scoliosis, which is due to attitude and which is assumed many times every day by every person in his normal life from this there is return. (2) Pathological which is an exaggeration of physiological scoliosis and which is characterized by bony and other changes from this there is no return.

The fundamental treatment of scoliosis is the production of physiological scoliosis of a reverse character to the pathological scoliosis already existing. Thus with the law of Wolff can be depended upon to cure all forms of pathological scoliosis. The law of Wolff while a sure process is a slow one consequently if the modifying and beneficial changes which are produced by the production of physiological scoliosis can be accentuated it is wise to do so. As has already been pointed out however it is impossible to make lateral pressure on the already deformed ribs. Pressure can be made behind the angle of the deformed rib which pressure with counter pressure on the opposite side of the thorax will tend to reverse the deformities existing.

The author begins his paper by citing the hypothesis on which this treatment is based and by reciting the twelve postulates upon which its practical application is founded.

Prince H. L.: The Treatment of Scoliosis by the Abbott Method. *Tr Am Orth As Phila* 1914 June. By Surg Gynec. & Obst.

Varying reports of success with the Abbott jacket are made. The reports indicate a possibility of improvement hitherto unexpected. The varying success with which the treatment is employed depends upon the mastery of its technique. This technique while simple in theory is very complex in practice and it is difficult to apply a jacket which will exert force only in the desired direction. A properly applied jacket needs very little padding. The less padding used the less rib deformity will be produced. It is important that the jackets should give plenty of room in which the trunk may swing in its correction.

At the present time it is impossible to say much as to the prognosis of any given case or as to the length of time necessary for treatment. A better knowledge of the etiology of scoliosis is necessary before this can be done. There will probably be found several etiologies and it seems certain from our present knowledge of the occurrence of anomalies in the lumbosacral regions as pointed out by Adams that surgery will be required for the correction of these anomalies before permanent cures can be promised in certain cases.

The conclusions drawn are as follows: Mild many moderate and some severe cases of scoliosis can be overcorrected and cured. The success will vary directly with the mastery of technique. In all cases the general condition will be improved by the jackets. It will be necessary to resort to operation in some cases, but the percentage of such cases cannot be learned until more is known of the etiology.

Packard G. B.: Recumbency in the Treatment of Pott's Disease. *Tr Am J Orth Surg* 1913 400. By Surg Gynec. & Obst.

The fact that so many pitiable deformities are the result of Pott's disease shows that the value of the recumbency treatment needs to be emphasized still more. It is of most importance in those cases in which the dorsal vertebrae are involved because here on account of the natural curve of the spine more weight comes on the bodies than on the articular processes when the patient is upright. The horizontal fixation is also most suitable for the growth of the child while on the other hand if the patient is up and around the growth of the trunk is very likely to be checked. It is the only efficient method for the cases which are complicated by paraplegia. Except in cases of paralysis it is not as successful for adults as for children. Confinement is irksome and there is little fear of deformity.

W. A. Cline.

Ryerson E. W.: Pott's Disease. Albee's Bone-Grafting Operation. Results in a Series of Twenty-Six Cases. *Tr Am Orth As Phila* 1914 June. By Surg Gynec. & Obst.

Of twenty-six unselected cases operated upon from six months to two and one-half years ago twenty-one are apparently well and do not require apparatus. None of the twenty-six was injured and all were improved. Three cases suppurred and in one the graft had to be removed. In another a portion of the tip became necrotic. This was a case where scarlet fever developed on the seventh day with a streptococcus infection occurring in the back and leg on the next day.

In this operation the grafts are sewed in under considerable tension with bichloride paraffin silk, and in most cases some correction of the deformity is obtained. The author believes this operation is a valuable addition to the treatment of spinal tuberculosis.

Ryerson E. W.: The Transplantation of Bone in Pott's Disease. *Surg Gynec. & Obst* 1914 211. 578. By Surg Gynec. & Obst.

The author reports the exhibition of thirteen operated cases at the Chicago Surgical Society's meeting. Two of the cases had been operated upon more than two years before. All of the cases show improvement and many of them are apparently cured.

Ryerson expresses great satisfaction with the operation which he has performed in twenty-eight



weeks the contractions could not be distinguished in force or extent from normal and not only the muscle into which the nerve was transplanted contracted but the neighboring muscles of the flexor group. Even muscles that had been deprived of their nerves for 21 days could be restored to activity by the transplantation of a normal nerve. WARD

H. Arlksen P. B. New Experiments in Nerve-Regeneration (N) und Wokeler's nervregeneration. *Norsk f. Lægevidensk.* 93 June. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

After nerve-suture sensory conduction begins again very soon even at a time when new formed axis cylinders cannot yet be demonstrated in the peripheral part of the cut nerve. In Recklinghausen's disease there is unaltered conductivity in the nerves although the nerve tracts throughout are interrupted by numerous tumors and in places the ordinary p. culture with marked differentiation of medullary sheath and axis cylinders is replaced by a mass of cells that are only slightly differentiated. On the peripheral side of the tumors there are normal nerve fibers where according to Waller's law we should expect to find degenerated nerve fibers.

This histological picture is also very similar in the two classes of cases. After cutting the nerve the

nuclei of the neurilemma proliferate in the central and peripheral stumps. They become surrounded with protoplasm that extends outward in long threads. Through continuous division of the nuclei the threads increase in number as well as length so that they form bundles inside the old Schwann's sheath and compress the medullary sheath and the axis cylinder. These bundles of fibers are most abundant in the central stump but they exist also in the peripheral one. They project from the cut surface of both nerve ends as a gelatinous mass. In the protoplasm threads, medullary sheath and axis cylinder are differentiated while for each nucleus a segment of nerve is formed that may be regarded as a single cell. The author shows how this differentiation is brought out in preparations stained with hæmatoxylin. Van Gieson's fuchsin, picric acid and Weigert's medullary sheath stain. In Recklinghausen's disease the nuclei of the neurilemma proliferate also and become surrounded with protoplasm that fills the old Schwann's sheath. But here there is no differentiation of the new formed tissue. It proliferates further and forms tumors. In both cases the continuance of the nerve condition is explained by the fact that the new-growths are of nervous origin with their point of origin in the nuclei of the neurilemma. ASBY NUSSEN

## DISEASES AND SURGERY OF THE SKIN FASCIA APPENDAGES

Longe H. The Present Status of Lupus Treatment (De gegenw. Zeit. Stand der L. p. therapie.) *D. Zeit. f. Wundheilk.* 93. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The treatment consisting of scarification, acupuncture and excoriation has the advantages of short duration, cheapness and relative certainty in small closed cases of lupus. Diathesis is indicated in small superficial areas where there is less question of cosmetic effect than of rapid recovery. Puncture with the gal. anocautery is easily done and in many cases is adequate. The advantages and disadvantages of different methods of treatment are given. Especially since the introduction of the Finsen treatment a large number of cures have been effected at the Freiburg clinic which outweigh its slight disadvantages. Extirpation is preferred in not very extensive cases of lupus on the trunk and the extremities. FRITZ LOE

Muschter J. Results of Combined Treatment for Lupus (Über D. erfolgreiche bei kombinierte L. p. therapie.) *Deutsche Wochenschr.* 93. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

On account of the general inadequacy of the results of individual methods of treatment a combination treatment has recently been used proposed by Doutrepoint and Grouen and good results have been obtained. The combination most frequently used is as follows: Excoriation, cauterization with Paquelin's cautery, injection of tuberculin

bichloride compresses, pyrogallol acid and roentgen treatment.

Tuberculin treatment is given first combined with bichloride compresses for a few days followed by excoriation and cauterization. The latter is necessary to close the lymph and blood vessels and hinder a scattering of the tubercle bacilli. The excoriated surface is treated with bichloride compresses until the scar is discharged. The further destruction of the remaining tubercular tissue is accomplished by pyrogallol salve 10 per cent until healthy granulations appear. Pyrogallol salve and bichloride compresses should be alternated. While the pyrogallol and bichloride is being used roentgen treatment may also be given. Of the 32 lupus cases the histories of which are given 5 were treated by excision and remained free from recurrence. The rest were given the combined treatment 23 of them recovered without recurrence in three there was recurrence and in one case there was marked improvement. FRITZ LOE

Salomon. The Treatment of Ulcer of the Leg with Pittylen (Die Behandlung der Ulcera crurii mit Pittylen.) *Allg. med. Zeit.* 1914. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

Pittylen is warmly recommended in the treatment of inflamed varicose veins and ulcers of the leg. In inflamed varicose veins without ulceration the inflamed part is thickly smeared with pittylen and

oil (pittulen 10 o zinc oxide 30 o olive oil to 100 o) and bound with gauze. Following the application the itching stops immediately and the inflammation soon subsides. Ulcers are treated with pittulen sal e (pittulen 10 o zinc oxide 20 o bismuth sub-

nitrate 20 o Ungt lenient Ungt simpl 20 o) and the area around the ulcer thickly smeared with pittulen oil. This treatment is found very soothing to the patient and leads to a relatively early cleansing and healing of the ulcer. WORMAN

## MISCELLANEOUS

### CLINICAL ENTITIES — TUMORS, ULCERS, ABSCESSSES ETC.

Murphy J H: Factors of Resistance to Heteroplastic Tissue-Grafting Studies in Tissue Specificity. *J Exp Med* 1914 xix 513.  
By Surg. Gynec. & Obst.

Previous observations have tended to show conclusively that tissues cannot be transplanted from one species to another even though these be closely related. Two theories have been brought forward to explain this failure in heteroplastic grafting. The two schools are still at variance and neither has been able to produce evidence conclusive enough to convince the other.

The first and most prominent theory is that of Ehrlich termed atresia. The experimental foundation for this hypothesis is the so-called zigzag transplantation of tumors between rats and mice. It was observed that a mouse tumor when grafted into a rat or vice versa would survive and proliferate for six to eight days but would later fail rapidly and be absorbed. If however the mouse tumor was removed during the proliferating stage and re inoculated into a mouse it continued to grow actively. After a period of six or eight days active growth in the mouse it could again be grafted into a rat. This zigzag grafting could be carried on indefinitely with no apparent effect on the tumor tissue or in lessening the activity of its growth. The interpretation suggested by Ehrlich is that each species provides its tissues with a specific food substance which is necessary for its maintenance and growth. The temporary survival of the mouse tissue in the rat is due to the amount of this specific food carried over with the graft. When this is exhausted the graft dies unless returned to its native species where it will accumulate a fresh supply of the specific food and again be able to survive for a time in a foreign species.

The chief opponent of this theory is Bashford who rests his objection on the findings in an experiment in which rats were inoculated a second time with mouse tumor. Under these conditions the second graft although containing an equal amount of the hypothetical food substance would survive only two to three days. From this fact he concludes that there is an active immunity developed against the cancer cell as foreign protein. The time of survival of the first graft he considers the time required for the development of this active immunity.

Bashford claims that the immunity to homoplastic grafting is an entirely different process and that it depends entirely on the blood vessel and stroma reactions. The merits of the two theories are not discussed in this article but are quoted by the author to give an idea of the present views on the subject.

In a previous communication it was pointed out that the avian embryo has no defensive mechanism against the growth of tissues of a foreign species. The tumor tissue of a rat for instance by interference from embryo to embryo could be kept growing in the chick for an indefinite period. The rat tissue underwent no marked change during its long sojourn in the chick embryo as was shown by the fact that at any time during this period it could be replanted successfully into its native species but was promptly disintegrated when grafted into the adult chicken.

Since it was found possible to graft various adult tissues into the embryo the experiment was repeated by the author *in vivo*. In the first series, comprising 20 experiments and over 150 embryos, grafts of rat sarcoma and bits of adult chicken tissues were placed side by side in the outer membrane of seven-day chick embryos according to the method described. The adult chicken tissues used were spleen, kidney, liver, bone marrow and connective tissue. The eggs were returned to the incubator and at intervals up to the eighteenth day of incubation part of each lot was opened and the grafts were removed for microscopic examination.

The author then seemed to have demonstrated that the chick embryo offers suitable conditions for the growth of implanted tissues, whether these be embryonic or adult of the same species or a foreign one. The chick at about the time of hatching develops a defensive mechanism against the tissue of foreign species. This resistance can be supplied to the embryo in the early stages if grafts of adult spleen or bone marrow are implanted. Under these conditions the embryo exhibits the same resistance to foreign tissue as does the adult and presents the same histological manifestations about the graft. Furthermore the same tissues spleen and bone marrow when grafted into an embryo with an established and growing rat tumor bring about a retrogression and absorption of the foreign tissue. Other adult tissues do not supply this power to the embryo. GEORGE E. BASHFORD

Goljanitzky J Experiments in Transplantation of Tissues Stained during Life (Über Versuche von Transplantationen an intravital gefärbten Thieren) *Med Ober 1914 lxxi 45*  
By Zentralbl f d ges Chir u i Grenzgeb

The author stained the tissues in living mice and rats by the intravenous injection of a 5 per cent carmine solution and then transplanted the skin and fascia. After the transplantation intravenous injections of 1 per cent trypan blue and 1 per cent isamin blue were given and after that the transplanted pieces were removed at different intervals of time for microscopical examination.

In autoplasmic transplantation of skin a large part of the epithelium and connective tissue was destroyed but the necrosis was only a partial one. The beginning of the necrosis was shown in the connective tissue cells by a flowing together of the granules of protoplasm that had been colored carmine. The diffusion of the protoplasm granules observed in the first few days returned to normal later. Even in the later stages there was no change in the cell nucleus. In autoplasmic transplantations macrophages were seen only at the edges of the transplant and in the later stages while in the earlier stages polynuclears predominate. In homoplastic transplantation of the skin the picture is similar for the first few days but total necrosis finally takes place. In homoplastic transplantation of fascia the author did not observe necrosis. The intravital method of staining makes it possible to demonstrate beginning necrosis earlier than can otherwise be done and before destruction of the cell nucleus begins.  
V SCHILLING

Carrel A The Transplantation of Organs *Med P & Crc 9 4 xii 460*  
By Surg Gynec & Obst.

During the last few years it has been definitely established that autoplasmic transplantations of organs are practically always successful that homoplastic transplantations although immediate results may be excellent are nearly always ultimately unsuccessful, and that heteroplastic transplantations are always unsuccessful. Homoplastic grafts alone would be of use but before being practical they must be rendered as safe as autoplasmic transplantations. As to the cause of these phenomena nothing is definitely known. It seems that the absorption is due to the power of the organism to eliminate foreign tissue. This is attributed to the spleen or bone marrow. When the action of these organs is less active foreign tissue can develop rapidly after it has been grafted.

The surgical side of the transplantation of organs is now completed as the results are excellent from an anatomical standpoint. As yet these methods can not be applied to human surgery for the reason that homoplastic transplantations are almost always unsuccessful from the standpoint of the function of the organs. Efforts must now be made toward the biological methods which will prevent

the reaction of the organism against foreign tissue and allow of the adapting of homoplastic grafts to their hosts.

EDWARD L CORVELL

Beckman E H Complications Following Surgical Operations *S & R Gynec & Obs 1 914 xvi 45*  
By Surg Gynec & Obst

Complications in a series of 6,825 hospital cases are reported from the Mayo Clinic for the year 1913. All of these patients had major surgical operations. None of them were fatal, the deaths being reported elsewhere. There were 117 infections or a percent age of 0.17 for the series. Bacteriological investigation was made from wounds in all infected cases. Thirty five cases in which the wound discharged a serum or seropurulent material showed no growth in cultures taken. All cases that showed any discharge whatever in the wound were considered as infected. Pulmonary complications are divided into acute congestion, pleurisy, bronchitis, broncho-pneumonia and lobar pneumonia. The total number of pulmonary complications in the series was 87 or a percentage of 0.12 for the entire series. Ether was used as a general anesthetic, novocaine as a local anesthetic. There were 14 cases of thrombophlebitis of the femoral or saphenous veins, six on the right and eight on the left side. Most of them occurred in cases that were not infected. Acute dilatation of the stomach occurred but three times. It is believed that early and systematic lavage has been responsible for the infrequency of this condition.

## SERA, VACCINES AND FERMENTS

Von Zubrzycki J R Studies of the Meiotagmin Reaction in Carcinoma and Pregnancy (Studien über die Meiotagminreaktion bei Carcinom und Schwangerschaft) *A & f Gy 1914 ci 152*  
By Zentralbl f d ges Gynäk u Geburtsh a d Grenzgeb

The surface tension of the sera of pregnant women and patients with carcinoma was tested with an antigen of linoleic acid and ricinic acid which were dissolved in absolute alcohol. The sera of normal non pregnant women reacted negatively with a few exceptions and there was a positive reaction in almost all cases of pregnancy and carcinoma. In syphilitics with a positive Wassermann reaction there was not a single positive meiotagmin reaction. The practical utility of the reaction is limited because of the fact that many tubercular patients and those with a number of other diseases may react positively.

GALFENBERG

Hitchens A P Current Developments and Problems in Vaccine Therapy *J Amer Med Assoc 1914 4 537*  
By Surg Gynec & Obst

It is the purpose of the author to show that the limitations which at present characterize the treatment of infections by vaccines are not permanent and that further investigations will result in a wide extension of their field of usefulness.

One of the phases of work which is in need of

further development is the preparation of vaccines. To produce a more efficient vaccine an effort should be made (1) to obtain a purer antigen (2) to obtain a vaccine which will cause a minimum of local and general reaction (3) to obtain a vaccine which will render the subject immune within the shortest possible space of time (4) to obtain an antigen in a state more readily available when brought into contact with the tissues.

It has been found that the peptone in the culture media on which bacteria are grown will under proper conditions cause anaphylactic shock. This would suggest that bacteria be grown on peptone free culture media or a second way of obtaining them peptone-free would be to use washed bacteria. Rowland has made a highly efficient vaccine by using the extracted nucleoproteins from bacteria. Tiberti obtained good results from the anthrax nucleoprotein.

Rasenow has shown that when bacteria are suspended in saline solution the latter becomes very toxic as a result of autolysis. In the case of the pneumococcus he has shown that the toxic autolysate is not necessary for the production of immunity. This confirms Vaughn's statement that the poisonous part has no relation to the antibodies which make the system refractory to disease. Vaughn's split products are used in the hope that the poisonous portion of the protein molecule may be eliminated thus making it possible to give the antigen in much larger doses without fear of a negative phase.

Bacterial antigens used in the complement fixation test may prove efficient as vaccines, although this is not necessarily the case as they are chemically related to the lipid.

Hirschfelder has prepared a vaccine by the partial digestion of the bacteria and has obtained good results although his reaction are very severe. The author suggests that perhaps the administration of some other non specific substance causing so profound a reaction might give the same results.

Fostered by the French schools interest in sensitized vaccines is apparently increasing. This method consists of mixing an immune serum with a vaccine or as in diphtheria a mixing of toxin and antitoxin this is supposed to produce both a passive and an active immunity this immunity however does not last long. Recently living sensitized vaccines have been used for immunization against diseases such as typhoid Asiatic cholera etc. There is however here a possibility of causing typhoid fevers. It is claimed that sensitized vaccines are likely to be more prompt in their effect and that the negative phase is much shorter.

It would seem from recent studies that in order to cure a disease all that is necessary is to inject a vaccine which produces antibodies which destroy the bacteria. This a true up to the point of the production of the antibodies but the bacteria reaching the tissues are able to resist the action of normal ant bacterial substances. This is

complished by chemical (toxins) and physical means. Antitoxins overcome the chemical barriers.

The most promising field of study for laboratory men and others at present is the relation of the infecting bacteria to the blood and lymph supply and how to bring the antibodies formed into contact with the infecting bacteria. The question of vaccine therapy is now one of Hydraulics. He suggests that when the content of the blood in antibodies is the greatest some drug should be given to cause a local active hyperemia in the region affected.

ELDEAN CART

Burnham A. C.: Vaccine and Serum Therapy in Septicemia. *A. Surg. Phila.*, 1914, 4, 61.  
By Surg. Gynec. & Obst.

The paper is based on the study of the record of one hundred and eleven consecutive cases of severe infection entering the Presbyterian Hospital New York City during the years of 1905-1913. The cases were treated by many different methods. The study of cases was especially directed toward the determination of the efficacy of vaccine and serum therapy. The author's conclusions are as follows:

1. Septicemia with true bacteremia is a disease of great severity and of exceedingly high mortality but except in the type associated with malignant endocarditis and in terminal infections, many cases are amenable to treatment.

2. Vaccines are of benefit in many of the cases not overwhelmed at the onset by the severity of the infection and clinically seem to benefit the majority of the cases.

3. Antistreptococcal serum is of great value especially during the early stage when its bactericidal powers are most pronounced and if given in sufficient dosage during the period of invasion will often change a systemic bacteremia into a localized infection.

4. The combination of a streptococcal serum, used in the early stage of septicemia, together with autogenous vaccines, used as soon as they can be prepared from blood cultures seems to be particularly beneficial. If the blood cultures are sterile vaccines may be prepared from the local lesion although this method is unsatisfactory and may lead to errors. Stock vaccines are still less desirable.

5. Neither sera nor vaccines (though they usually do little harm) are free from danger, and the dosage and periods should be carefully worked out.

6. Open air treatment in cases in which cultures are sterile and as an adjunct to vaccine and serum therapy seems to be the best method of increasing the resistance of the patient. By Surg. Gynec. & Obst.

Well R. Studies in Anaphylaxis is a Study of the Cellular Theory of the Graphic Method. *J. Med. Research*, 1914, 12, No. 87.  
By Surg. Gynec. & Obst.

7. This study of anaphylaxis the author endeavors to determine whether reaction occurs within the

cells of the body as is believed by some or in the fluids as is claimed by other observers. To clear up these disputed points he has carried out a long series of experiments and in the beginning he points out the fact that guinea pigs which have been injected with the serum of a rabbit immunized against a foreign proteid become hypersensitive to that proteid. In previous experiments by Dale it has been shown that the uterus of a guinea pig which has been passively sensitized by this device making use of the serum taken from an immunized guinea pig presents exactly the same anaphylactic reaction as does that of an actively sensitized animal.

From his study the author reaches the following conclusions:

1 The uterus of a hypersensitive guinea pig responds in a characteristic manner upon the addition of the antigen (Schultz Dale)

2 The presence of immune bodies in the blood of the guinea pig whether in small or in large amounts does not lead to the slightest response upon the addition of antigen to the uterine preparation

3 Desensitization of the living guinea pig after active sensitization leads to impairment of the power of response by the uterine muscle. If desensitization is complete the uterus fails entirely to react upon the addition of the antigen. If incomplete the uterine contraction is correspondingly enfeebled and sluggish.

4 The uterus removed from an actively sensitized guinea pig which has been killed in anaphylactic shock may either fail to respond or may give a somewhat impaired response. From this observation the conclusion is drawn that a sensitive animal may be killed by an amount of antigen considerably less than would be required to saturate the antibody content of the animal.

5 In passively sensitized guinea pigs it is shown that the dose of immune serum sufficient to prepare the guinea pig for a fatal anaphylactic shock induces a uterine condition in which the addition of antigen leads to a typical response. Smaller amounts which *in vivo* prepare the guinea pig for a moderate reaction give as an analogous result a proportionally diminished response in the uterine preparation.

6 Desensitization of the passively sensitized guinea pig deprives the uterus of its power of response.

7 The gradual and spontaneous loss of sensitivity by the passively prepared guinea pig is accompanied *passim* by a loss on the part of the uterus of its capacity to respond to the antigen.

8 This loss precedes the development of an anaphylactic condition toward the heterologous (rabbit) immune serum employed exactly as in the live animal.

9 These data lead to the following generalizations: ( ) The anaphylactic condition is entirely dependent upon the sensitization of the cells of the body. ( ) All conditions which in any way influence the degree of sensitivity of the cells in the same degree alter the anaphylactic state or sensitivity

of the animal. (3) The presence of immune bodies in the blood whether in small or in large amounts does not in the slightest degree contribute toward the production of the anaphylactic response in the guinea pig.

GEORGE E. BAILEY

## BLOOD

Hill L. W. Report on Leucocytic Inclusion Bodies.

Bost. M. & S. J. 1914 clv 79

By Surg. Gynec. & Obst.

The author has investigated a series of cases at the Boston City and Massachusetts General Hospitals with a view of ascertaining the relation between Dohle's leucocytic inclusion bodies and several other diseases.

The discoverer of these bodies originally considered them to be fragments of a disintegrated spirochæta supposed to be the cause of scarlet fever. This theory has been discredited by subsequent investigators and by many they are considered to be merely fragments of disintegrated nuclei or by others to be broken-down tissue fragments which have been ingested by the leucocytes.

One hundred specimens of blood were examined by the author from patients suffering from scarlet fever, erysipelas, pneumonia, syphilis, empyema, secondary anemia, and serum rash, including blood from thirteen normal individuals.

The majority of the cases of scarlet fever, erysipelas, and pneumonia showed inclusion bodies while none of the others showed them. The author arrives at the conclusion that these bodies are composed of nuclear material the disintegration in all probability being due to toxins of the streptococcus.

JAS. H. SKILES

Schattauer F. Treatment of Internal Hemorrhage (Z. Therapie innerer Bl. tungen) F. 1913

94 xxi 3

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Almost all the preparations which are used for the treatment of internal hemorrhage, hydrastinine, stypticin, and ergot, depend on their property of having a vasoconstrictor effect on the musculature of the vessels. But the contraction of the vessels is produced, not only in the bleeding region but on all the blood vessels, and this causes an unpleasant rise in blood pressure. Gelatine and astringents have been given to increase the coagulability of the blood.

A new preparation that produces hæmostasis and yet avoids a rise in blood pressure is styptase. It consists chiefly of tannic potassium chloride and calcium salts in the colloids. It also inhibits the formation of transudates and exudates. Schattauer has treated a case of bleeding ulcer of the rectum and cases of endometritis and post-abortion hemorrhage with styptase. The preparation is to be recommended in hemorrhage of the uterus except for puerperal hemorrhages in which the purely mechanical effect of the uterine musculature



is defective In puerperal hemorrhage it serves as an auxiliary to ergot treatment **BRITZ**

**Gumston C. G.** The Technique of Comparative Hyperaemia. *Ann Surg Phil* 10 4 17 641  
By Surg Gynec. & Obst.

The author describes in detail a method of application of Moskowitz's sign. The essentials of the correct method of applying the test are the securing of a complete anæmia of the diseased extremity and its mate the sudden simultaneous release of the constricting band is and careful observation of the waves of hyperæmia in a good light. Any venous stasis is to be avoided. The extremities to be compared are first emptied of blood by being held in an upright position or if this is painful by an elastic bandage applied so as to drive the blood toward the heart. The arterial flow is then completely obstructed by a flat rubber band for a period of five or six minutes. Following the release of the constricting bands the two extremities are observed carefully and the rapidity intensity of color and stopping points of the hyperæmia waves are noted.

The author discusses briefly the variations seen in practice and concludes that the diagnostic value of the test should be limited to cases of gangrene due to vascular occlusion in which cases the test is the surest guide to the proper site of amputation which should be done quite a little above the lower limit of the hyperæmic zone. **BAR EN BROOKS**

**De Tarnowsky G.** Personal Experiences with Coagulène-Kocher Fonio. *J Gynec & Obst* 9 4 21 641  
By Surg Gynec. & Obst.

Coagulène is a preparation obtained through fractional centrifugation of mammalian blood whereby the blood platelets become separated from other cell elements. It is used locally or intravenously in a 5 or 10 per cent aqueous solution freshly sterilized. Its action is to accelerate and intensify the normal coagulating time of the patient's blood used locally in the course of surgical operations it obviates the use of ligatures allows a closer coaptation of tissues and prevents the formation of post-operative hæmatomata its greatest field of usefulness lies in bone and intracranial work. Following its use no drainage is necessary. Intravenously it may be given in quantities varying between 100 and 250 ccm of a 5 per cent solution. Favorable reports are already available concerning its efficacy in hæmophilia and gastroduodenal hemorrhage, in hæmorrhagic pancreatitis and in purpura hæmorrhagica.

Coagulène was elaborated in Kocher's clinic in Bern by his first assistant Fonio. It is at present sold in the form of a granular substance having a sugar base. This substance is weighed and dissolved in sufficient sterile water to make either 5 or 10 per cent solution which is at once used by boiling not to exceed five minutes. The aqueous solution must be used within 24 hours as it rapidly loses its

activity. The dry preparation retains its normal activity for several months. By means of an ordinary syringe a few drops of the solution are dropped on bleeding surfaces and allowed to remain *in situ*. For intravenous use the ordinary apparatus used in normal saline injections suffices.

**Liwano A. W.** The Biological and Surgical Significance of Thrombokinas (Die biologische und chirurgische Bedeutung der Thrombokinas). *Ist. no-med J* 1913 cxxviii 203  
By Zentralbl f d ges Chir u i Grenzgeb.

From a study of the coagulation of the blood and the rôle that thrombokinas plays in it two therapeutic possibilities are disclosed. By the administration of thrombokinas the deficient coagulability of the blood may be increased in hæmophilia and cholæmic hæmorrhages and by inactivating the increased thrombokinas content of the blood the danger of thrombosis may be overcome. It also gives an explanation of thromboses in the blood vessels after traumatic and post-operative hæmatomata.

The author describes the method of obtaining thrombokinas in use at Von Oppel's clinic, and gives some case histories illustrating the significance of large hæmatomata in the formation of distant thromboses and infarcts. Large hæmatomata should be opened, freed of blood clots, and tamponed to a mild thrombokinas intoxication. By repeated administration of small doses of thrombokinas an artificial hæmophilia may be produced by immunization. **STROUSZ**

**Amberg, Jr. S.** Fat Embolism in Fractures, with Special Reference to the Early Symptoms (Über Fetterembolie bei Frakturen mit besonderer Berücksichtigung der Frühsymptome). *Wien M R* nedsch 19 4 xxviii 95  
By Zentralbl f d ges Chir u i Grenzgeb.

The author describes two cases of fat embolism after fractures with severe symptoms one of which recovered after ligation of the thoracic duct by Wilm's method the other without any treatment.

The author discusses the question of whether early diagnosis and prognosis are possible. Of 57 unpublished cases 15 ended fatally 7 of them within the first 2 hours in all of the latter there was a fracture of the pelvis.

The sudden death is explained by the fact that on account of the great vascularity of the pelvic organs it passes directly into the blood in greater quantities. In these cases Wilm's operation cannot do much good as the fat has not yet reached the lymphatic duct at most its later absorption through the lymphatic vessels can be rendered harmless. According to Grodahl's theory the diagnosis can be made from the symptoms numbness followed by symptoms of shock after a free interval, rise of temperature after preceding fall and rapid pulse. Mahler's mounting pulse. Prognosis cannot be made from the symptoms. **COSE**

## BLOOD AND LYMPH VESSELS

Horsley J S: Surgical Repair of Blood Vessels  
Its Technique Its Uses and Limitations  
S & G Co & Obi 9 4 viii, 536  
By Surg Gynec & Obst

The author believes that sensational newspaper articles have done blood vessel surgery much harm. Even in animals no organs such as the kidney and no limbs have been transplanted with permanent success. A transplanted limb continues paralyzed and useless and while a transplanted kidney may functionate for a while it gradually loses its structure. However blood vessel surgery has four fruitful fields: (1) Trauma of the vessels, (2) malignant growths that involve the blood vessels, (3) aneurysms and (4) transfusion of blood.

In suturing vessels, Horsley claims that the same principle of approximating endothelium obtains as in suturing intestines — only the endothelium is on the inside of the vessel. So in suturing vessels a flange must be turned out just as in suturing intestines it must be turned in.

He describes his technique for vessel suturing as follows: Three guy sutures are inserted and attached to buttons on an arterial suture staff of his design. The threaded ends of the last two guy sutures are not cut but are used as a double mattress or cobbler's stitch. The suture staff converts the circumference of the vessel into a triangle and the vessel is held so that the intima is everted in the third that is being sutured. All stitches are inserted under the same tension instead of under varying tension as when the sutures are held by hand and a flange with everted intima is turned out the intima being accurately approximated by the cobbler's stitch.

Moure P: Study of Transplantation of Blood Vessels and Particularly Its Application in Surgery to the Reestablishment of the Continuity of Blood Vessels and Musculomembranous Channels (*Etude des greffes vasculaires et particulièrement de leurs applications chirurgicales et du blassement de la continuité de vaisseaux et des conduits musculo-membraneux*). *Thèse de Doct. Par* 9 4. By Journ 1 de Chirurgie.

This is a most useful review of the present state of the subject in France. In each of the chapters the author reviews the facts previously known and adds his own experimental results and the clinical results obtained in human surgery. The technical part goes in detail into the operative technique which is so delicate that the slightest violation of asepsis may result in complete failure.

After having reviewed the work of Hoepfner, Carrel and Guthrie, Goyannes, Lexer and Delbet, the author recalls the facts that a blood vessel completely isolated from the neighboring part by aseptic excision of its walls, continues to live that vessels isolated from the body preserve their vitality for a relatively long time — eight days that transplanted vessels adapt themselves to their new surroundings if they are sufficiently irrigated

and nourished. In this connection he tried transplantation of the omental vessels but unfortunately numerous experiments on dogs were negative; the omental artery was rapidly transformed into a small fibrous cord.

He believes that some heteroplastic grafts may give better results than those with vessels preserved too long if the grafts are taken from those animals whose serum is the least toxic for man. He admits that the heteroplastic graft tends to be progressively obliterated but says that it remains permeable long enough for the necessary collateral circulation to be established. Autoplastic transplantation of arteries is impossible and the results with arteries that have been kept some time uncertain; therefore he believes that the best method is the transplantation of sections of veins: external jugular or saphenous. He had perfect results in 13 cases with dogs. Histological examination confirms the clinical results. If the operation has been strictly aseptic there is no trace of inflammatory reaction; the presence of a mass of leucocytes with giant-cells is due to an attenuated infection. The transplanted vein does not play the part of a simple conducting tube but lives independently and undergoes changes in structure which make it resemble an artery by hypertrophy of the middle elastic layer. Heteroplastic grafts are simply conducting tubes. Thrombosis and hemorrhage are the two post-operative complications most to be feared but both may be avoided by careful technique and rigorous asepsis.

Transplantation of vessels has been tried 17 times and succeeded 13 times in reestablishing the continuity of an artery, once to reestablish the continuity of a vein. Of these cases seven were aneurysms of the femoral or popliteal artery with recovery in five cases and death in two, once from gangrene and once after four months though the immediate result was satisfactory; there were three other cases of aneurysm of the axillary, external iliac and brachial arteries; death from thrombosis resulted in the first two cases, recovery in the third. In three cases the graft was made to replace a segment of the femoral resected in the course of operations for tumor; one was a failure, the two others successes.

Doyen's case in which a segment of the popliteal was replaced by the jugular vein of a sheep was a success.

Moure concludes that transplantation of vessels though an exceptional operation is absolutely indicated in certain cases. He describes a number of cases in which blood vessel grafts have been used to restore the continuity of musculomembranous canals such as the ureter and the urethra. Tanton tried it in 16 cases of hypospadias or stricture. They were all failures, due, Moure thinks, to infection. But Cantas has used incomplete transplantation for urethroplasty with a perfect result persisting for 14 months. He left the saphenous vein adherent at first and detached the flap later and sutured it to the lower surface of the penis. This was a case of hypospadias. Tuffier tried venous urethroplasty once

without success. Iran made a successful attempt to restore Stenson's duct by means of a vein graft. Payr drained the cerebral ventricles in hydrocephalus with a vein-graft. Ruotte used a vein graft in anastomosis. An incomplete transplantation of the internal saphenous was utilized.

This interesting work seems to show that vascular transplantation though still relatively limited in use finds its most natural indication in reestablishing the continuity of arteries when ligation is impossible. The other uses are interesting or curious but their doubtful or bad results make further experimental research necessary before applying them in human surgery.

Pierre Cæsar

### SURGICAL THERAPEUTICS

Watkins T. J.: Treatment of Infected Wounds  
*J. Am. M. A.* 1914 12 1997

By Surg. Gynec. & Obst.

The abuse of wounds caused the author to write this paper. His treatment is as follows:

An infected abdominal wound is covered with a hot moist non-irritating dressing of gauze. The gauze is kept moist with boric acid or normal salt solution. The dressing is covered by a protective layer of rubber tissue, oiled paper or silk, to prevent evaporation. Heat is supplied by a hot water bag. This dressing is changed from one to three times daily depending on the amount and character of the discharge. This treatment is continued until the redness, inflammation, active suppuration or sloughing disappear. It is until the wound assumes a healthy appearance. The edges of the wound are separated and then drawn together by sterile strips of adhesive plaster and a dry dressing applied.

Sutures are rarely removed except in instances in which they cut through the skin. The wounds are not probed or separated, no drainage material is inserted and no medication is used. No exception is made in cases of intestinal fistula or abdominal aneurysms.

The moisture is used solely to promote drainage. It favors drainage chiefly by preventing coagulation and desiccation of the discharge. The heat increases the blood supply and hastens suppuration and has some of the features of the Bier treatment. An extensive suppuration will drain through a very small opening if desiccation of the discharge is prevented. I example in a recent case of extensive suppuration following an operation for a large ventral hernia satisfactory drainage occurred through two small openings at the site of tension sutures.

Moisture is at times used to promote drainage. Care is observed to avoid all procedures which would tend to disseminate the infection such as probing, manipulation, separation of the wound or use of rubber tubing, packing, irrigation and the like. It has been known for a long time that the use of antiseptics injures the tissues more than it does.

bacteria. Aside from the destructive power of antiseptics and the dangers of dissemination of the infections by irrigation solutions, the force of the fluid mechanically removes some of the delicate reparative tissue.

Infection in cases of vaginal section usually results following extensive operations especially when there is much retention of wound secretions. Prophylactic treatment is important especially in regard to strict asepsis. The author has abandoned much of the post-operative treatment. The treatment of infection consists in elevating the head of the bed and applying hot moist dressings to the vulva. The advantages of this treatment are:

1. The patient is but little disturbed mentally or injured physically.
2. The wounds heal quickly as there is little surface for repair.
3. The strength of the wound is relatively not much impaired in the absence of much sloughing.
4. The danger of secondary contamination is minimized.

Edward L. Corsett.

### ELECTROLOGY

Cumberbatch E. P.: The Influence of the X-Rays on Some Cases of Perianal Suppuration  
*Lancet* Lond. 1914 12 1391

By Surg. Gynec. & Obst.

The author reports four cases, two of infective dermatitis, one of probable hygroma of the forearm subsequently infected and one of tuberculous burnitis (perianal). Other cases are still under treatment. The four cases showed chronic suppuration small in amount and superficial suppurations. The first case received 12 applications of X-rays at longer intervals, the second case received small applications at short interval and the third and fourth cases received medium applications at intervals of medium length. The dosage was measured by Babouraud's method. The suppuration was stopped in all four cases.

In arresting the process of suppuration the X-rays do not act only if at all by destroying the pyogenic organisms. In experiments made to test the action of the X-rays upon cultures of bacteria the pyogenic organisms were not destroyed. The writer believes that the X-rays produce some local tissue reaction against the invading organisms and at the same time some general reaction. In many of the cases that have been treated there has been considerable improvement in the general health although in some of them the suppuration has not been arrested.

D. von R. Boer.

Bumm L.: Further Experience with the Irradiation of Carcinoma (Weitere Erfahrungen über Carcinombestrahlung). *Berl. M. H. & Arch.* 1914 12 193.

By Zentralbl. f. ges. Gynäk. Geburtsh. & Gynäk.

Bumm reports his experience in the irradiation of 8 cases of carcinoma during a year and a half.

There was local healing in 3 to 5 weeks in the beginning a clinical condition of irritation was present for 8 to 14 days. The local effect was wonderful but not comparable with that of the cautery or caustics. Microscopically there was progressive destruction of cancer tissue the cells of which were affected first and most markedly because they belong to rapidly developing new growths and are young and tender but connective tissue and muscle tissue were also affected by intense action showing hyaline degeneration and forming calluses which in the neighborhood of cavities may cause strictures perforations and fistulae. These changes were observed in the surrounding tissues after six months.

The permanency of the recovery could only be determined from specimens obtained by operation or at autopsy. The findings in six such cases are described. In three of the cases there were such small remnants that they could only be seen microscopically and from which certainly no recurrence was to be expected deep down in the three other specimens there were still foci from the size of a pea to that of a nut. All of the cases were very advanced carcinomata. There had been complete obliteration of the carcinomatous tissue to depths of from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  cm.

Among the 108 cases only 40 of which were operable there have been only 15 recurrences. 10 inoperable cases recovered. This does not mean permanent recoveries for the time of observation has not yet been long enough. He warns against applying doses of over 100 mg for a very long time for in spite of filtration they produce burns on the surface and progress the hyaline degeneration in the depths of the tissues also rapidly increasing anæmia and fever as high as 40 degrees.

He describes his technique and says that 15 operable cases of carcinoma of the cervix were treated in this way without any injury moreover there was local recovery of an inoperable carcinoma with röntgen rays alone. A carcinoma of the cervix was irradiated abnormally only and there was an undoubted deep effect and injury of carcinoma cells at a distance of 9 cm. MORSE

Cole L. G. Röntgenocinematography of the Stomach and Cap. *Am J R 12 of 94*

By Surg. Gynec. & Obst.

The author gives the history of attempts to produce röntgenocinematographs of the stomach and describes in detail his own apparatus for this method of amniation. He points out that the early so-called röntgenocinematography was nothing more than serial röntgenography for only 3 röntgenograms were made in 22 seconds by the old method while the new apparatus is capable of making four röntgenograms per second.

The röntgenocinematographic apparatus is described in detail and illustrated with several cuts. It consists of a film fitting mechanism with a counter weight which is mounted under a lead

lined table in a dark booth suitable for perfect fluoroscopic examination. Above the mechanism and secured to the under surface of the table by sliding rails, is an iron frame which carries the exposed and unexposed films and an extra frame permitting the use of any of the standard cassettes. With this apparatus the gastric peristalsis may be seen fluoroscopically and at any time by simply turning a crank serial röntgenograms or true röntgenocinematographs can be made all without disturbing the patient. The Coolidge tube is especially adapted for the work. The author states that serial röntgenography is of greater practical value in diagnosis and that röntgenocinematography is only worth while from a scientific standpoint.

WM A EVANS

Doderlein A and von Seuffert E: Further Experience with the Mesothorium Treatment of Carcinoma (Ueber weitere Erfahrungen mit der Mesothoriumbehandlung des Carcinoms). *Mitt. d. k. k. med. Ges. 1914* 12 5

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

In the past year about 180 cases have been treated in the clinic with the rays. There were many failures but some very significant successes. Among 153 cases of cancer of the uterus all subjective and objective symptoms disappeared in 31 cases 12 among them being inoperable. The results were unfavorable in recurrences. In cancer of the rectum and breast the results were not so good as in cancers of the female genitalia. Among the injurious by effects there were high and long continued fever (absorption fever) and burning and tenesmus in the rectum. In four cases a rectovaginal fistula developed but it was uncertain whether it was the result of the cancer or the treatment. There is as yet no technique that can be applied to all cases. Filtration with brass covered with silver seems better than with lead. WOSER

Müller C. Physical and Biological Basis of the Effect of Radio-Active Substances, Especially Mesothorium and the Possibility of Substituting Röntgen Rays for Them. (*Physik und biologische Grundlagen der Strahlwirkung radioakt. Substanzen besonders des Mesothorium und der Ersatz derselben durch Röntgenstrahlen*). *U. n. n. med. W. 1914* 9 4 12 134

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The author discusses the deep effect of radioactive substances. He believes that when the soft  $\gamma$  rays are filtered out by the use of metals of high atomic weight the value of the nearness of the source of the rays has been overestimated in the direct effect. He acknowledges the therapeutic value of the secondary  $\beta$  rays produced by the filter as compared with the inactive  $\gamma$  rays (Bragg's theory). He admits that he overestimated the depth of the effect of secondary radiation it is at most 1 cm but there is a biological effect to a depth of 4 cm not 1 cm as he formerly believed. The cell toxin

choline which is split off is taken up by the neighboring tissues and has an effect. Where there are sound layers covering the tumor that must be spared, roentgen treatment is to be preferred because there is danger of injuring the sound tissues by the secondary rays of radio active substances. Tumors to which the radium can be immediately attached should be treated with it. Metals of high atomic weight should be inserted between the tumor and the radium for the production of secondary rays. He suggests the possibility of substituting the cheaper roentgen rays for radio active substances by means of suitable apparatus and tubes.

LORVELDT

### MILITARY AND NAVAL SURGERY

Meyer A. W. Infection of Wounds in War from Experience in the Balkan Wars 1912-1913  
(Die Wundinfektion im Kriege nach Erfahrungen in den beiden Balkan Kriegen 1912 bis 1913) Arch f kl Ch 914 cui 708

By Zentralbl f d ges Chir u i Grenzgeb

Meyer an assistant of Wilms, spent 11 months in the Bulgarian War. His observations are of special value for he not only had experience in the hospitals of Sofia, Philippopol and Dedagatsch but also as an active military physician at the front. He believes with Rejher that the infection of wounds is almost always primary. Injuries with the smallest bullets and with the smallest openings that quickly closed up showed the severest phlegmons. The larger the opening made by the bullet the greater the opportunity for primary external hemorrhage and for the discharge of the fluid from the wound and therefore the less danger of infection. The larger openings in the meninges, pleura, peritoneum and joints show a tendency to secondary infection.

Bacteriological examination of the infections was frequently made. They were mixed infections, staphylococci and streptococci prevailing. Examination could not be made for anaerobic bacteria. Tetanus was comparatively rare but it was chiefly a secondary infection. The primary infection takes place from the bacterial content of the clothing. As the infection is generally primary he does not think the package of dressings is of any very great value. It is too small to thoroughly guard against secondary infections. He thinks the German packet of dressings is as inadequate as the Russian. Every soldier must have two packets of dressings, one with two large thick pieces of gauze and another with two long calico bandages. He values the mastisol bandage, not for its bactericidal effect but on account of its adhering to the dressings. All large wounds that are accessible to secondary infection he treats with balsam of Peru. In the treatment of infections he believes in early free incision and does not believe that much can be accomplished by suspension and stasis.

In gunshot fractures he believes in active treatment. If with good fixation the secretion of pus does not stop in a few days, he makes a free opening and removes the detached fragments. This prevents troublesome fistulae with repeated discharge of sequestra, resection in continuity and amputation. He does not attach much value to resection in continuity. He thinks extension in gunshot fractures even of the thigh is unnecessary. Penetrated plaster casts, in his opinion are the best dressing. He opens up infections of the joints, and has never seen good results from joint resection. He warns against waiting too long for amputations.

The erysipelas infections were severer than are generally seen in civil life but they were mostly due to carelessness on the part of the staff. He does not think that pyocyanus infection is so dangerous as von Oettingen does. He believes that after the beginning of tetanus even amputation is without result while prophylactic injections are successful. Tangential shots of the skull should be trephined but the patients should not be transported for two or three weeks. He treats shots in the abdomen conservatively but believes there are cases that should be operated on if the external conditions are favorable.

He points out the advantage of fixation of the patient on the stretcher and expresses the wish that physicians might be better instructed in the application of splints for fractures than they are at present.

FRANK

Makras M. Experiences and Impressions in War Surgery (Kriegschirurgische Erfahrungen und Eindrücke) Die Wochenschr f Chir 914, 21, 23  
By Zentralbl f d ges Chir u i Grenzgeb

The author took part in the campaign as staff physician of the Grecian army. In the first part of the expedition he was in the first military hospital, just back of the front then in a field hospital just back of the besieging army at Janina and then in a military hospital at Philippas. During the second war he had charge of a hospital at Salonika. He discusses the organization of the Greek military medical service. He can see no particular difference between the wounded and poisoned bullets. He found that both frequently remained in the body. The number of infections he observed was slight in comparison with those observed by other surgeons during this war.

He does not think much of the packet of dressings as a few soldiers make use of it and he thinks most infections are primary, carried in with dirt from the skin or bits of garments. He gives a brief account of 1615 wounds observed in the first war. He confirms Zöge von Manteuffel's views as to gunshot injuries of the skull. He advises early operation in tangential shots. He treats shots of the spinal cord and abdomen conservatively. He thinks the total mortality of the injured in the Grecian army was not more than 4 or 5 per cent.

COLLIER

**Symposium Sanitary Report of the Imperial Prussian Army the 12th and 19th (1st and 2d Saxon) and 13th (Imperial Württemberg) Army Corps from Oct 1 1910 to Sept 30 1911** Prepared by the Medical Division of the Imperial Prussian Ministry of War (Sanitätsabteilung über die königlich preussische Armee, das 1. und 2. und 13. königl. h. sächsische und das 1. (königl. württ.) bayerische Armee Korps für den Berichtszeitraum vom Oktober 1910 bis 30. September 1911. Bearbeitet von der Medizinischen Abteilung des königl. preussischen Kriegsministeriums) Berlin Müller & Sohn 93

By Zentralbibl. d. d. Chr. u. Grenzgeb.

Thus exhaustive report of the health conditions in the German army contains much of interest to the surgeon because it deals with large numbers of cases observed by different surgeons in persons of about the same age and living under the same conditions. Because with soldiers it is necessary to pass judgment as to their capacity for service and as to when they should be invalided it follows that not only the immediate results are given but that the cases are followed for a long time. Of the cases reported 809 are luxations 4,443 fractures 303 gunshot wounds 112 operations on the ear including opening of brain abscesses and ligations of the jugular 74 operations for empyema 7 laparotomies 1137 operations for appendicitis 626 operations for hernia 4 resections 21 exarticulations 27 amputations 31 strumectomies 7 nephrectomies 32 cases of opening of perinephritic abscess 47 operations for tumors and 701 other major operations.

**Intestinal obstruction.** Three cases directly due to inflammation of the appendix and peritoneum are not considered. Seven cases were operated on with one death two rendered capable of work the rest recovered but were unable to resume work 4 cases were ileu from strangulation. In three cases there was torsion of the colon and once obstruction of the flexure which was overcome by pulling on the flexure. The following were noteworthy cases:

1. Meckel's diverticulum was the cause. The patient was a musketeer. A diagnosis of intestinal torsion from an unknown cause was made. Six hours after the beginning of symptoms an operation was performed. First an oblique incision was made in the region of the caecum and large quantities of a turbid watery fluid were discharged. There was kinking of the appendix which contained a fecal fistula. The appendix was removed. As several coils of small intestine were completely collapsed they were followed up. Forty centimeters above the caecum a looplike constriction was found which proceeded from a loop of small intestine and ended in the umbilicus a part of the small intestine being cut off by it. The cord was removed and proved to be a Meckel's diverticulum. The diverticulum as far as the middle of it was a cavity lined with mucous membrane from there on it was a connective tissue cord. After closure of the abdominal wall, the patient was capable of service.

2. Another case of ileus caused by Meckel's diverticulum.

3. A man was run over by a hay wagon. Operation performed 26 hours later disclosed volvulus of the small intestine on its axis. The volvulus was untwisted and the patient was able to return to service.

**Unshot wounds.** In all there were 393 cases of which 44 injuries with pointed bullets are of special interest 33 of them being suicides 3 attempts at suicide and 8 accidents. Of the suicides 23 were shots in the head 9 shots in the breast and one shot in the abdomen. Although the shots were at close range in 8 cases the opening at which the bullet entered corresponded to the caliber of the bullet and in one skull shot the exit was smaller than the entrance. Those cases are noteworthy in which whole sections of the brain were discharged through the wounds. One case was a shot in the occiput one in the chin and some — the number is not given — were shots in the mouth.

The first case seems typical. The shot entered 3½ cm behind the right ear crushed the left half of the head and forced out the brain so that only the cerebellum remained. There was extensive destruction of the skull. A similar case was one in which the shot passed obliquely from the right posteriorly to the left anteriorly and swept the eye out of the orbit. Among the injuries with pointed bullets only the accident cases survived among these there was one shot in the head at 1,000 meters distance. The shot passed through the skull and caused only a compound fracture of the frontal. Two cases were fractures of the thigh at 300 meters distance the rest were slight injuries of the soft parts.

Among the 88 revolver and pistol shot wounds there were 48 deaths 43 of them suicide. Two cases are cited: (1) A shot made an oblique oval opening in the right temporal. It passed from the left Sylvian fissure toward the left anterior central convolution to the surface of the brain recoiled from the skull passed at almost a right angle downward and backward in the brain and stopped in the middle of the third left frontal gyrus. (2) The shot entered the right temporal passed obliquely through both frontal lobes rebounded from the left parietal and was found in the left cerebral cortex. Among 23 injuries with Teschings and Flobert's bullets there were 2 deaths. One was a shot in the head in a suicide case the other an accidental shot in the breast. The Tesching bullet penetrated the lungs the pericardium the left pulmonary artery the left auricle left pulmonary vein and descending aorta. The wounds in the vessels and lung were irregular slits 0.5 cm long. One hundred and fifty-eight injuries with blank cartridges are reported. Of the 39 deaths 38 were suicides 21 were head injuries 11 breast and 1 abdomen.

The report shows clearly that the effect of blank cartridges at close range is terrible. There was total destruction of face and skull and of parenchymatous organs of the body cavities and extensive laceration.

of hollow organs such as the trachea and œsophagus and the gastro-intestinal canal. Surgical operations were undertaken in some cases but they were unsuccessful in all but one. In this case there were only small openings in the stomach and duodenum. The fatal wound was at the root of the mesentery. The man was able to re-enter service. The thoracic wound of a suicide was especially interesting. The fourth and fifth costal cartilages were splintered, the lungs and pericardium were not injured but the latter was filled with blood because the right auricle was ruptured and the anterior cusp of the bicuspid valve torn away. In the shots at close range there was an exit in only one case. In a blank cartridge shot at 10 cm distance there was a compound fracture of the forearm while in shots at over one half meter distance there were no severe injuries to the skull, body cavities or soft parts. It is significant that among the numerous blank cartridge injuries there was not a single case of tetanus although prophylactic injections for tetanus were given in only 18 cases. This shows the salutary effect of the army regulation made in 1903 that the wadding of the cartridges should be sterilized with steam before being used.

**Contusions of the abdomen.** Among 26 cases 16 of which were operated on there were 5 injuries of the intestines—three fatal 2 capable of service 3 injuries of the spleen—0 fatal 1 capable of service 3 kidney injuries—2 deaths 1 capable of service 1 injury of the stomach—death 1 injury of the liver—capable of service 1 injury of the mesocolon and great omentum—capable of service. In 14 cases the cause was a kick by a horse, one rupture of the spleen was caused by a fall on the corner of a stool and another by the patient catching his side arms in the spokes of a wheel and being thrown to the ground.

The following cases are of interest:

1. A patient run over by a wagon was not operated upon at first. On the eleventh day laparotomy was performed. Two and one half liters of fluid from a hematoma were emptied from the abdomen. One half liter of blood and bili-ry fluid from the right pleural cavity was released by puncture. After that several punctures of the right pleural cavity were made and bile like fluid was emptied out. Twenty two days after the accident a second laparotomy was done. A cavity filled with bile like fluid was opened between the diaphragm, liver, stomach and ascending colon which showed adhesions with the gall bladder. After 6 weeks rib resection was performed

on the right and a large cavity of the lobe of the liver opened which contained three fourths of a liter of hematoma fluid. The opening communicated with the thoracic cavity through a tear in the diaphragm. The patient recovered.

2. The patient suffered from a kick in the right kidney region. On operation the upper pole of the kidney was found almost completely separated and there were several deep tears in the lower one and the kidney vessels were ruptured. Nephrectomy was performed and a tear three cm long in the diaphragm was sutured. Death occurred after six days there being symptoms of uremia. On autopsy it was seen that the left kidney was absent, the left ureter extended only 1 cm from the bladder and ended in a blind pouch.

3. Another patient was injured by a lance that had made an opening 2 cm long in the duodenum. The opening was sutured. Recovery followed.

In spite of the very severe degree of their injuries, 6 of the patients were capable of reentering service.

FRANK

**Podesta. Military Marine Statistics of the Japanese Sanitary Service in the Russo-Japanese War.** Translation of the Japanese Sanitary Report (*Marineärztliche statistische Betrachtungen über den japanischen Sanitätsdienst im russisch-japanischen Kriege. Nach dem Übersetzungen des japanischen Sanitätsberichts. Veröff. d. Gr. d. Marine-Sanitäts* 94 VIII, 3).

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

A historical and statistical report is given showing that many died from injuries from mines and many were wounded from shots on the one hand and less died from shots and few were injured from mines on the other. The effect of the mines was deadly both qualitatively and quantitatively of the shots on the contrary only quantitatively. A troublous appliance with a double curve made from light paper maché as recommended as a means of transportation. It is made in three sizes. Hammocks are provided to prevent drowning. The author proposes that the haversacks be provided with thin waterproof silk or rubber covers in order to keep their contents dry and to add to the contents a flannel garment, package of dressings, and a supply of food. In order to make it possible more easily and more frequently to save the firemen and others who are endangered by the sudden collapse of machine guns it is necessary that information of the threatened disaster be given early. Zuck. V. 1878.

# GYNECOLOGY

## UTERUS

Jansen H: Myoma and Carcinoma of the Body of the Uterus (Myom u d korpuscarinom am Uteru) *Wochenschr f Gebhrl u Gyn* 38 914 1914

By Zentralbl f d ges Gynäk Geburtsh u d Grenzgeb

The earlier idea that a carcinoma may arise from a fibroma of the uterus has been proved false. The author believes from research by Hirschmann and Adler, Iwase and Frankl that myoma may influence the origin of carcinoma of the body of the uterus in the sense that myoma may produce changes in the endometrium that favor the development of carcinoma. The myoma does not produce glandular hyperplasia of the mucous membrane which can be regarded as a preliminary stage of carcinoma, as has often been assumed. The hyperemia of the endometrium that always accompanies myoma is the essential point. It is the expression of a state of chronic irritation which with the addition of other predisposing and thus far unknown causes favors the development of carcinoma of the body of the uterus. The statistics from autopsy material are more important in the settling of this question than pathological anatomical investigations.

In the course of 18 years (1895-1912) at Meissner's Sanatorium there were 450 cases of myoma of the uterus, 306 of which were operated on and 13 of which were complicated with carcinoma of the fundus; that is carcinoma was found in 2.8 per cent of the total number of cases and in 4.25 per cent of those operated on. This is somewhat higher than the earlier statistics (Piquand 3 per cent, Winter 1.2, Haulstein 4, and Martin 3.8). The proportion of carcinoma of the body to carcinoma of the cervix (according to Winter 1) is very markedly increased in the myomatous uterus in favor of carcinoma of the body (Winter 0.5, Haller 0.38, Krug 1.25). The author comes to the conclusion that myoma undoubtedly favors the development of carcinoma of the body of the uterus. *REVUE*

Werner P: Carcinoma in the Uterus and Adnexa at the Same Time (Über gleichzeitiges Vorkommen von Carcinom im Uterus und den Adnexen) *Arch f Gyn* 94 75 1915

By Zentralbl f d ges Gynäk Geburtsh u d Grenzgeb

Billroth's demonstration of a certain diagnosis of multiple primary tumors is too exacting; multiple primary tumors do not necessarily have a different structure, the matrix of the individual tumors can often no longer be distinguished and it is impossible to always determine the metastases for each tumor. The author's concept of metastases is the same as that of Schottlaender.

The report for 5 years at the second gynecological clinic included 15 cases in which the uterus and adnexa were carcinomatous, 10 cases in which the tumors were derived from another 3 in which they were independent and 2 doubtful cases.

The cases were as follows: (1) Primary papillary carcinomatous cystadenoma with retrograde metastases in the uterus. (2) Papillary glandular carcinoma of both ovaries, lymphatic metastases in the myometrium, metastases in Douglas pouch. (3) Papillary carcinomatous cystadenoma with metastases apparently from implantation, on the wall of the uterus, yet their lymphatic origin was afterward demonstrated. (4) Papillary glandular carcinoma of the right ovary and undoubted implantation metastases on the uterus. (5) Carcinomatous glandular cystadenoma of the ovary involving the uterus by contiguity. (6) Carcinomatous papillary cystadenoma on the right with direct proliferations on the tube, the uterus and the left ovary. (7) Flat epithelial-celled carcinoma of the cervix with lymphatic metastases in the left tube. (8) and (9) Adenocarcinoma of the body of the uterus with transmission to the tube by continuity. (10) Carcinoma of the body of the uterus and fungus tumor in the ampulla of the right tube which was regarded as a true mucous membrane metastasis since no lymphatic dissemination could be demonstrated. (11) Carcinomatous glandular proliferating cystadenoma in the right ovary, a papillary cystadenoma on the left and an adenocarcinoma of the uterus. No carcinoma in the blood or lymph vessel. (12) Carcinomatous papillary cystadenoma of the right ovary and the right tube and beginning flat epithelial-celled carcinoma in the cervix. (13) Exophytic adenocarcinoma of the body of the uterus and carcinomatous papillary cystadenoma partly pseudomucinous of the right ovary. (14) Exophytic carcinoma of the uterus and adenocarcinoma of the ovary with abundant proliferation on probably independent of the other but of almost the same structure. (15) Adenocarcinoma of the uterus and tube probably independent but not certainly so.

None of the cases was diagnosed as a double tumor. *R. SCHÖDTER*

Velt J: Principles of Our Treatment of Cancer of the Uterus (Grundsätze unserer Behandlung des Uteruskrebses) *Pflichterzgeb f Geburtsh u Gynäk* 94 vi 49 1915

By Zentralbl f d ges Gynäk u Geburtsh u d Grenzgeb

The operation for cancer of the uterus should be limited to those cases that are favorable in every



way. But it seems that even these if irradiated with sufficient material can be cured in about the same time as by operation. In Germany there are no cases showing permanent results from irradiation after five years or more but some French authors seem to have such results. The quickness and sureness of the recovery in cancer treated by irradiation depends on the amount of radio active material available and on how early the case is treated. Failures are to be explained by the fact that unsuitable cases are treated. Cases in which the general health is involved to such an extent that there is marked cachexia should not be treated. It seems possible by irradiation of the primary focus to obtain retrogression in the lymph glands. The irradiation of swollen lymph glands without irradiation of the primary focus does not seem to produce any result. *Abstr.*

Weinbrenner C.: Treatment of Genital Carcinoma with Mesothorium (Die Behandlung der Genitalcarcinome mit Mesothorium). *M. f. k. f. C. b. i. k. Gynäk.* 1914, 21, 15.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The work contains a further contribution to the experience with mesothorium treatment. The author reports 32 carcinomata and 2 cases of lymphatic hemorrhage which he treated from July 1 to Dec. 1, 1913 with 144 mg active radium bromide distributed over an area of 140 sq mm. No roentgen irradiation was used. The 8 most successful cases are described. Regularly after each irradiation there was a fall of about 1,000,000 in the erythrocyte count after four days the blood picture became normal again and then the irradiation was continued.

The changes which appear so soon in the vessels cause the author to attribute the quick changes in the parenchyma of the cancer to the direct effect of the irradiation in causing disturbances of nutrition in the vessels of the region. In one case he observed kinking of the ureter and stasis of the urine in the kidney pelvis caused by distortion of the bladder from too sudden contraction of the crater of the carcinoma and the vault of the vagina. *Münster.*

Von Graff E.: Effect of Pregnancy on the Growth of Malignant Tumors (Über den Einfluss der Schwangerschaft auf das Wachstum maligner Tumoren). *M. f. k. f. C. b. i. k. Gynäk.* 1914, 21, 7.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author tried to determine experimentally whether pregnancy hastens the growth of malignancy. In 10 experiments were used an experimental animal. Section experiments showed that pregnancy was not favorable to the growth of the tumors. Of course the results of these experiments cannot be held to apply to human tumors especially carcinoma of the uterus. The experiments were with implanted tumors outside the genital system. But it indicates that the question of the unfavorable effect of

pregnancy on the late results of radical operation for cancer of the uterus even clinically is not yet unanimously decided. *Berlin-West.*

Bécirès: Röntgen Treatment of Myomata (Die Röntgentherapie der Myome). *Strahlentherapie* 1914, 1, 134.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The treatment was tried on 6 palpable myomata with hemorrhage 60 myomata with hemorrhage besides 3 with normal menses and 2 who had passed the menopause in 36 the tumor could be felt above the pelvis. The ages varied from 30 to 50 years. The results were appearance of the menopause and marked decrease in the size of the tumor. In 2 cases there were no results. The author believes that the roentgen rays affect the fibromatous tissue itself as the decrease in size preceded the appearance of the menopause and myomata developing after the beginning of the menopause decreased under roentgen treatment. In each patient a strip of skin 1 cm broad in the median line was protected in case future surgical operation should be necessary. *Münster.*

Gaus C. J. and Krinski B.: Mesothorium Treatment of Myomata and Metropathies (Die Mesothoriumbehandlung der Myome und Metropathien). *Strahlentherapie* 1914, 1, 440.  
By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The authors assumed that only the gamma rays of radio active substances were effective in gynecological deep irradiation and carefully carried out animal experiments which confirmed their hypothesis. The same thing is true as to the effect of both radium and mesothorium on the female genitalia.

The technique of the authors is to use the highest possible dose in a unit of time so long as this is possible without burning the healthy tissues. Every preparation is biologically measured on the body of the patient that is the erythema dose of the radio active preparation is determined. Fifty milligram of mesothorium are used in a gold capsule 2 mm thick covered with a thick enough layer of rubber. One secondary rays. This is placed in the vagina 2 or 3 times for 24 hours and then a rest of two and one half to three weeks is given. When erythema appears treatment is stopped until it disappears. All myomata were irradiated including the intra cervical ones and those with concomitant disease of the adnexa. Age and anemia were not taken into consideration. The results were very satisfactory. Menorrhoea persisting over six months, the tumor almost completely disappearing in all cases except one and decreasing to half of the original size in that one. There were marked symptoms of the menopause in only 3 per cent of the cases. Mesothorium is to be preferred to roentgen treatment in this respect. The effect can be hastened by combined mesothorium roentgen treatment. Recovery generally took place after three roentgen treatments and two applications of mesothorium.

The combination is very useful in cases where recovery is slow with rontgen treatment alone. The injurious by-effects are discussed: vomiting, slight dizziness with marked anemia on leaving bed at the close of the treatment, tenesmus of the bladder in only two per cent of the cases, no severe injury to the tissues when the right filtration was used. In markedly anemic patients the danger of thrombosis may be avoided by rest in bed during the treatment. Rontgen treatment is given the preference in myomata and metropathies only on account of its cheapness. Mesothorium should always be used in malignant tumors or sometimes in complicated cases as a combination of rontgen and mesothorium treatment. I OUSLEYDT

Roy J. E. Abscesses of the Wall of the Uterus and Their Treatment (Les collections à purifier de la paroi utérine et leur traitement). Thèse de Doct. Ps. 1914. By Jou. al de Chirurgie

In 1906 41 cases of abscess of the wall of the uterus were published. Roy adds several new ones. These abscesses are generally located on the posterior surface of the uterus or in the region of the cornua. They may develop toward the mucous or toward the serous covering in the latter case involving the danger of serious peritoneal complications. The etiology may be puerperal infection, gonorrhoea or traumatism. The symptoms are variable and not very characteristic. Abdominal palpation generally reveals pain over the uterus, an abscess of the vaginal portion will be revealed by the speculum, sometimes the finger introduced into the cervix reveals a submucous abscess. By manual examination may show an abscess, coexisting often with an increase in the size of the uterus. Diagnosis is almost impossible. Pyosalpinx is generally diagnosed.

Uterine abscess may often be prevented by asepsis during and after labor and by reducing the number of obstetrical examinations. After they have developed they can rarely be excised through the vagina. Vaginal hysterectomy in such cases has given a mortality of 75 per cent. Laparotomy is to be preferred. If the abscess is solitary and there is no disease of the adnexa it may be simply evacuated and drained through the abdominal wound. This method gives a mortality of barely 5 per cent. Hysterectomy should be performed if the patient has passed the menopause, if there are multiple abscesses or if there are lesions of the adnexa. Abdominal hysterectomy for uterine abscess has given a mortality of 6.66 per cent.

SALVA MERCADÉ

Adler L. Causes and Treatment of Haemorrhage of the Uterus (Über Ursachen und Behandlung von Uterusblutungen). Med. Kl. Berl. 1914.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb. The source and cause of the bleeding should always be determined if the purpose of deciding upon

treatment. An accurate history is more valuable than physical findings especially in extra uterine pregnancy. The history is less valuable in cases where instead of the menses or before the menses a slight haemorrhage extending over a long time appears. Conservative treatment must be rejected in extra uterine pregnancy.

The author then reviews his and Hitschman's study of endometritis. Glandular and interstitial endometritis alone do not cause haemorrhage, the adnexa especially the ovary must be involved, or there must be retrodeviation of the uterus. And in chronic metritis the menses are apt rather to be scanty, there is no characteristic haemorrhage. The fact that the ovarian function regulates the menses, that in adnexitis there is irregularity of the menses only when the ovary is involved, that oligomenorrhoea occurs in atrophy of the ovaries and cessation of the menses after castration lead to the conclusion that severe haemorrhage must be dependent on disturbances in function of the ovaries. A polypous hyperplastic uterine mucosa or atony of the uterine musculature may favor menorrhagia. Its appearance in chlorosis, Basedow's disease, Addison's disease and myxoedema is probably due to disturbances in the internal secretion of the ovary. In many patients the coagulation time of the blood is also increased.

The hyperaemia of the pelvic organs caused by sedentary life, corsets, constipation and masturbation causes menorrhagia rather than metrorrhagia. It is well known that disturbances in menstruation may also be caused by psychic stimulation, general diseases and circulatory diseases. The change in the conception of menstrual disturbances has influenced treatment.

Curettage should be employed only for the removal of remnants of abortion as a means of diagnosis for suspected malignancy and for polypous benign hyperplastic mucous membrane. In gonorrhoeal endometritis curettage is useless and even dangerous especially if there are inflammatory tumors of the adnexa. If palliative treatment fails and the haemorrhage does not stop, radical operation should be performed. Curettage in myoma is dangerous. In the haemorrhage of puberty curettage does not stop the bleeding, these patients often have infantile uterus or status thymolymphaticus and other treatment is required.

The menses are often improved in the menopause and in young girls by rest in bed, change to a high altitude, chalybeate baths, rough food and ergot treatment. The injection of 1 ccm of pituitrin subcutaneously for five days is effective, three to four months administration of mammin every year is also recommended. Calcium is useful only if coagulation is defective, serum should be avoided on account of anaphylaxis and tamponing the vagina is a last resort. The rontgen treatment should be used only in carefully selected cases. There should be constant control by a gynecologist of all cases of myoma or other genital haemorrhages.

treated by röntgen rays Radium treatment can not yet be recommended for hemorrhage from benign tumors.

For MULLER.

Clark P S Glandular Extracts in Menstrual Disorders. Cf 14 Chicago, 1914 xxv 256  
By Surg. Lynch & Obst.

This paper is based upon experiments which have been carried on in the use of the extracts of some of the glands of internal secretion at Hahnemann Medical College.

Formerly it was believed that the relationship between the different functions of the genital organs with each other and with numerous other functions was due exclusively to the central nervous influence. It has been proven more recently that the genital organs influence the development and function of distant tissues and organs chiefly by means of their internal secretions i.e. by chemical agents (hormones). Thus in menstruation the ovaries secrete into the blood certain substances (hormones) which cause a congestion of the uterus and its mucosa the uterine glands. In the presence of hyperemia begin to excrete their mucus and this mucus contains a digestive ferment trypsin. The trypsin containing mucus flows out onto the surface and digests off the superficial endometrium—the so-called swollen cell layer—the smaller capillaries are also opened and menstruation takes place. The trypsin content of the mucus mixes with the blood and destroys the fibrinogen hence normal menstrual blood does not clot.

The influence of the internal secretion of the ovaries upon the breasts and thyroid glands is reviewed. Amenorrhea or scanty menstruation due to functional inactivity of the ovaries, to ovariectomy to X-ray influences or to destruction of the ovarian function by infectious diseases and accompanied by the manifold disturbances of the nervous and circulatory systems which usually result from the absence of the hormones are all benefited or entirely relieved by the administration of ovarian or lutein extracts. In a woman 26 years of age whose uterus tubes and ovaries were removed on account of the results of severe inflammatory disease one of the ovaries was transplanted into the cellular tissue beneath the breast. It is too early to state just what the results will be but the hope is to prevent the artificial menopause with its cardiovascular storms atrophy of the uterus and vagina and most of all the mental changes which at times lead these patients to suicide or to insane asylum.

The woman who is gradually gaining in weight whose menstrual periods are farther apart and more scanty and who is suffering with nerves may be deficient in ovarian (thyroid or pituitary) secretion. The pituitary gland when reduced in activity gives rise to adiposity and sexual infantilism in addition to the well known changes in the skeleton and skin.

In many cases of perversion of the internal secretion it is necessary to resort to the therapeutic

test namely to administer first one and then the other of the extracts until it is determined which is indicated. Many cases of so-called neurasthenia are due to hyperthyroidism secondary to ovarian insufficiency and the use of lutein or ovarian extracts offers in some cases a good prospect of benefit. The disturbances of the circulation and of the mind and of the nervous system occurring at the menopause, whether artificial or natural are favorably influenced by the administration of ovarian substance or lutein extract.

Cases of menorrhagia and metrorrhagia without anatomical basis are benefited at times by the use of lutein extract.

The use of mammary extract has been tried also in some cases of menorrhagia and metrorrhagia, and at times with marked results but in others no results whatsoever. The question whether the mammary gland has an internal secretion or not is open to a good deal of doubt but Clark has been led to try it by the fact that in many instances a woman suckles her babe beyond the usual time with the idea of preventing the return of the menses and thus avoiding conception. The latter hope of course does not hold true but the former has some basis in fact.

If it is a fact that menstruation can be postponed in many cases by prolonged lactation, it could rather point to an internal secretion from the breasts.

Schröder R: Condition of the Uterine Mucous Membrane at the Time of Menstruation. (Über das Verhalten der Uterusschleimhaut in der Zeit der Menstruation. Monatshefte für Geburtshilfe Gynäkologie 44, 2, 1913.)  
By Zentralblatt für Geburtshilfe u. Gynäkologie.

This follows the author's atlas. The normal cycle of the uterine mucous membrane takes up the question of whether there is a discharge of the mucous membrane in menstruation and if so to what extent. The material is described in detail. The thickness of the mucous membrane during the intermenstrual period is markedly increased over that of the postmenstrual period. For the last few days before menstruation there is a definite division into compact, spongy and basal layers. Shortly before the beginning of bleeding there are figures showing the disintegration of nuclei and leucocytosis. During the early part of the bleeding the compact and large part of the spongy layer are destroyed partly by autolysis and partly by phagocytosis.

The beginning of the disintegration from the internal os, as described by Williams could not be demonstrated. The same influences that cause the degeneration of the corpus luteum at the beginning of the period also cause a primary

no marked inflammatory changes in the mucosa the stages of the cycle progressed in about the same way.

Schroder lays great stress on accurate data, there are individual variations in the agreement in time between the anatomical and clinical menstruation but the difference in time is short. In order to avoid post mortem changes the material in all cases was fixed during or immediately after operation. As a result of the trauma in curettage subepithelial hematomata could be found at all stages of the cycle. Schultze's oxydase reaction showed that pyknosis was the result of disintegration of glandular epithelium and stroma cells, and not of the destruction of wandering leucocytes. The regeneration forms of the remaining epithelium and the clearly demonstrable reconstruction of the surface indicate a preceding loss of mucous membrane. There is a diffuse infiltration of leucocytes throughout the mucous membrane with the exception of the deep basal layer. Micro-organisms were never demonstrated and the infiltration of leucocytes was seen only at the time of menstruation. Substances set free by the beginning disintegration of the mucous membrane or biochemical processes in the cells probably have a chemotactic effect on the leucocytes.

HOLZGA.

Bandler S W Constitutional Dysmenorrhoea  
V I M J 19 4 XLIX 96

By Surg Gynec &amp; Obst.

This article is essentially a discussion of the interrelation of the secretions of the ovary, the thyroid and the uterine lining, and of treatment for disturbed balance of these relationships.

It is Bandler's belief that the idea of interrelation and antagonism between the ovary and the thyroid appear to be generally accepted.

He says the reaction of the individual to the premenstrual cumulative influence of the ovarian secretion follow different types. Some have no warning of approaching menses some have local phenomena only and a goodly proportion have a constitutional reaction of either irritation or depression. The reason for these different types are to be found in the character of the ovarian secretion in its relation to other secretions and in the sensitivity of the nervous organism that is being played upon. While in some women the thyroid is scarcely stimulated at all by the ovarian secretion in others the slightest ovarian premenstrual activity is at once followed by a response of the thyroid in the form of actual or relative overactivity. The reaction of an individual to the premenstrual phase is a fair indication of the sensitivity of that patient's nervous system.

Preceding menopause constitutional dysmenorrhoea becomes frequent. Whatever the cause the administration of thyroid extract may serve as an aid to diagnosis. In the case of hyperthyroidism the premenstrual noises will be accentuated whereas in a hypothyroid or hypothyroid type it would be a specific. Some of the hyperthyroid

cases absolutely require opium or belladonna for their typical extreme restlessness.

The author believes that the instability of the relation which the thyroid bears to the ovaries and uterus makes the thyroid more susceptible to the causes which produce these same diseases in a far smaller proportion in men.

The monthly play produced on a woman's nervous system by the premenstrual ovarian stimulation causes either of itself or in many cases, through an exaggerated response on the part of the thyroid a group of nerve phenomena like those in hyperthyroidism to which may be given the term constitutional dysmenorrhoea. Bandler classifies these patients under four types: (1) the phlegmatic or depressed cases; (2) the nervous excitable cases; (3) those that change from hypo- to hyperthyroidism as the menses approach; and (4) a very common type of mild hyperthyroidism.

The author believes that alcohol, coffee, tea, iodides and arsenic stimulate the thyroid and that it is quieted by rest, freedom from sexual stimulation, correction of pelvic congestion and pains, milk diet, ergot, glycerophosphates and especially bromides, opium and belladonna.

The uterine lining acts on the ovaries and is acted on by them. If menstruation can be stopped and in these patients the ovaries be left the over secretion of the ovaries and the cyclic response of the thyroid seem to be markedly weakened and usually removed and the reaction of the ovaries to the endometrial hormones is done away with. In a nutshell, hysterectomy is Bandler's final choice.

The effects of the hypophysis on the sexual apparatus the author believes to be very slow and not cyclic.

E A BULLARD

Thwaites J A Haemato-Therapy in a Case of Menorrhagia of Puberty. *Med J S Afr* 1914 3  
9 4 LX 3 By Surg Gynec & Obst.

The author reports a case of menorrhagia occurring in a girl of 15. During the previous six months the patient had not been free from the loss of blood longer than 8 days at a time. Uterine drugs had been administered without effect. Rectal bimanual examination revealed no pelvic abnormality.

Ten cubic centimeters of human serum from the patient's mother were given subcutaneously. Immediate improvement resulted. After an interval of 12 days menstruation returned and lasted 8 days. On the second menstrual day 30 ccm of serum were injected since which time the patient has been quite normal.

EDWARD L CORNELL

Nadory B Fascia Lata Implantation in the Treatment of Genital Prolapse in the Female (Fascia lata Implantation zur Heilung des blichen Genitalprolapses). *Zentralbl f Gyn* 1914 44

By Zentralbl f d Gynäk Geburtsh & Grenzgeb.

Nadory recommends the implantation of a strip of fascia in the place of the wire ring recommended

by Freund in recurrence after prolapse operations and in old women instead of total extirpation. The procedure is as follows: A strip  $1\frac{1}{2}$  cm wide and 25 cm long is cut from the fascia lata of the thigh and the wound sutured. The strip of fascia is kept in warm physiological salt solution. A slightly curved, not quite blunt needle is inserted in the raphe of the perineum near the lower end of the wall of the vagina and is carried upward along the edge of the right labium minor until it comes out below the bulb of the urethra. The strip of fascia is drawn through with silk threads. The same procedure is repeated on the other side. The two ends of fascia are then crossed and pulled upon until the entrance to the vagina seems narrow enough and then they are fixed to the vaginal wall.

Nádory recommends as an improvement on this method that the ends of the fascia be crossed and with the aid of a Bunn hebstectomy needle carried up along the posterior surface of the symphysis and both ends fastened in the skin of the mons veneris. This forms a figure eight. Recently he has experimented with substituting the fascia from cattle for fascia from the patient's thigh. This was previously hardened in 5 per cent formalin and sterilized for 15 minutes with 70 per cent alcohol vapor. In one case such a strip was successful.

HICZELL.

Welbel W. Operative Treatment of Recurrences after the So-Called Vesicovaginal Interposition of the Uterus (Di operat. Behandlung der Rückfälle nach der sog. Interpositio teri vesicovaginalis). *Zentralbl. f. Gynäk.* 913, xxx u. 808. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. C. Grenzgeb.

Recurrences occur after vesicovaginal interposition of the uterus either from the cervix moving forward under which condition the body of the uterus may or may not be loosened from its fixation or from the fundus of the uterus falling forward. The cause of the first condition is relaxation of the sacro-uterine ligament and a weak perineum. The cause of the latter is poor fixation of the fundus relaxation of the anterior vaginal wall and a weak perineum. A simple perineorrhaphy is insufficient for treatment. Formerly the sacro-uterine ligaments were shortened by the abdominal route and a perineorrhaphy performed. Now after dissecting the vagina from the uterus and shortening the sacro-uterine ligaments agnally or better abdually the uterus is sutured into the cleft in the levator by Wertheim's new method. WAGNER.

Lenormant C. and P. tit Dutaillis, D. High Amputation of the Cervix Combined with Colpectomy—Bouilly's Operation—In the Treatment of Prolapse (L'amputation haute du col utérin combinée à la colpectomie—opération de Bouilly—dans le traitement des prolapsus gécitales). *J. d. Air.* 94 xu 45. *Rj Surg. Gynec. & Obst.*

This operation is indicated in cases of prolapse with elongation and hypertrophy or inflammation

of the cervix. It comprises a supravaginal amputation of the cervix, a colpectomy of the anterior wall of the vagina and a posterior colpopneurothomy. It overcomes the hypertrophy of the cervix and causes a certain degree of involution and atrophy of the body of the uterus, retracts the enlarged vagina, both laterally and anteroposteriorly and reconstructs the perineal support of the genitalia. In addition to the usual preparation it is often advantageous to do a curettage.

**First step.** The cervix is seized by the anterior lip with traction forceps and drawn as far as possible outside the vulva, which has the effect of stretching the exuberant anterior wall of the vagina. Four grasping forceps are attached to this anterior wall to mark the corners of the flap to be resected; these forceps should be placed carefully (Fig. 1). The two lower ones are attached to the cervix itself at the insertion of the vaginal wall near the external orifice exactly at the union of the anterior and posterior semicircumference. The two upper ones are placed directly above them and about a finger's breadth below the urinary meatus. With the point of a bistoury a transverse incision is traced passing below the two lower forceps, then two vertical incisions are carried upwards from the ends of it, outside the forceps up to the upper ones so that a large rectangular flap is marked out including almost all of the anterior wall of the vagina. This flap is then dissected and separated from the anterior surface of the uterus. This dissection is facilitated by traction on the two lower forceps. Below and on the sides the dissection is performed with scissors, care being taken never to lose contact with the uterine tissue; then when the plane of cleavage between the uterus and bladder is reached the dissection can be finished with the finger covered with a compress. The dissection finished, the neck of the uterus is denuded to the isthmus and the flap, holding only by its base, can be lifted; the bladder can be seen adherent to its under surface.

**Second step.** The flap is held with forceps and the bladder separated from its under surface. This separation is accomplished with scissors; some care is necessary to avoid injuring the bladder, but there is no serious difficulty. It is accompanied by moderate hemorrhage which can easily be controlled by pressure or if necessary by applying forceps to a few arterioles. When the bladder is completely freed and pushed up the vaginal flap is cut transversely at its base below the two upper forceps.

**Third step.** It is advisable at this time to ligate the cervical branches of the uterine artery on each side. They form a group of three or four small arteries spreading out in a fan shape on the sides of the cervix and the dome of the vagina; they are the source of hemorrhage when the cervix is amputated. Bouilly and Loewy do not make this a separate step in the operation but use them and ligate them as they are cut while the cervix is being amputated.

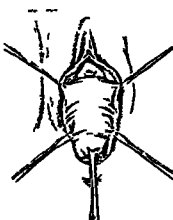


Fig 1

Fig 1 (Lenormant and Petit Dutailis) Beginning of first step. The cervix is drawn down four forceps mark the corners of the anterior vaginal flap. The dotted line shows the flap.



Fig 2

Fig 2 (Lenormant and Petit Dutailis) End of the first step. The dissection of the anterior vaginal flap is completed. The flap is lifted leaving the cervix denuded.

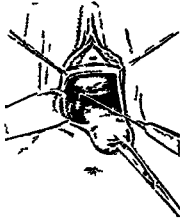


Fig 3

Fig 3 (Lenormant and Petit Dutailis) Third step. Dissection of the bladder and resection of the anterior vaginal flap are finished. The needle is passed under the cervical branches of the uterine artery on the sides of the cervix.

but it seems preferable to ligate them *en masse* and proceed with the cervical amputation without hemorrhage. The uterus is pulled toward the opposite side a narrow retractor inserted a curved artery needle threaded with No. 1 catgut passed under the whole group of arteries and the fibrous tissue which surrounds them and they are ligated *en masse*.

*Fourth step.* With two cuts of the scissors the cervix is split into halves an anterior and a posterior then the anterior one is detached by transverse section at the isthmus. If the ligation of the cervical arteries has been correctly performed there will only be insignificant hemorrhage and the slight oozing which still takes place will be completely stopped by the suture of the vagina to the cervix.

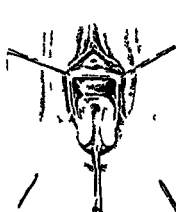


Fig 4

Fig 4 (Lenormant and Petit Dutailis) Fourth step. The cervical branches of the uterine arteries are ligated on each side. The first thread of the anterior agnoscervical suture is passed.



Fig 5

Fig 5 (Lenormant and Petit Dutailis) End of the fourth step. The anterior agnoscervical suture is finished.



Fig 6

Fig 6 (Lenormant and Petit Dutailis) Beginning of the fifth step. The posterior lip of the cervix is held up with forceps. The dotted line shows the posterior incision.

but it prevents their development which results in absence or great rarity of cystic follicular atresias—these formations were found in ovaries functioning normally absence or rarity of the corpora lutea of atresia absence in women who died young and rarely in the more aged absence of the corpora lutea of menstruation in all the cases absence of fatty inclusions in two corpora lutea of pregnancy found in tubercular patients

The development of the interstitial gland is variable in patients with fibroma with respect to the number of follicular atresia and the presence of the corpus luteum of menstruation The corpus luteum of menstruation may be double In six cases it was lacking entirely In five cases there was one corpus luteum in one of the cases the woman had had a unilateral ovariectomy 18 yrs before In one case there was a corpus luteum in each ovary in one case two corpora lutea in the same ovary These differences bear no relation to the age of the patients These facts do not accord with the theories that assume that the mature follicle ruptures regularly 12 to 14 days before the menstrual period If one assumes a relation between ovulation and menstruation there may be some justification for refusing to accept such facts of served in pathological organs but there seems to be no reason for assuming that the presence of two corpora lutea was due to the development of the fibroma as Pillet thinks for in some cases there was no corpus luteum

There is no doubt that the ovaries play a part in the uterine hemorrhage observed in cases of fibroma Cases of cure of the hemorrhage by ligor is operation proves this The fact that when one or two corpora lutea were present the menses were regular and when there was a corpus luteum they were irregular tend to show that the ovary has a regulating action L CH RICH

Klemperer P Interstitial-Cellled Sarcoma of the Ovary (Uterine Zellsarkom des Ovars) B J pth Anat allg Lath Jena 1914 1 43  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

Three cases of round cellled sarcoma of the ovary one in a patient of 14 and the two others in patients 19 yrs of age were very similar histologically to the interstitial cell tumors of the testicle In the third case in which ovarian tissue was still present there was no well-defined boundary line between the tumor-cells and those of the theca interna while so far as this was histologically possible all transitional forms between the two kinds of cells could be recognized

After rejecting other explanations of the origin such as endothelioma and uterine development of tissue elements from a teratoma Klemperer concludes that it was a proliferation of the cells of the theca interna which are analogous to the interstitial cells of the testis In such ovarian sarcomata there are frequently anomalies in sexual

development and even pseudohermaphroditism is met with with relative frequency This would seem to confirm the hypothesis of those authors who believe that the internal secretion of the interstitial cells has an influence on the development of the secondary sexual characters WEIHLER

London A A Hydridiform Mole with Lutein Cysts of Both Ovaries Hysterectomy and Double Ovariectomy Austral J G 9 4  
x vi 431 By Srg Gynec & Obst

The author reports a case of vesicular mole in a woman 20 years of age 14 months after her first normal labor The tumor itself showed no unusual microscopic or macroscopic findings but the ovaries appeared as two polycystic bodies each measuring 15 x 6 cm The cysts were multiple but not multilocular The walls of these cysts were made up of cuboidal cells identical with those found in the normal corpus luteum Granting that these are lutein cysts, Lennox suggests three hypotheses as to their origin and personally inclines to the last theory (1) That the multiple cysts represent a malignant dissemination though both ovaries of lutein cells form a single unit cyst these cells have taken on active growth and have reproduced the cystic character of the original neoplasm (2) That most of the granular fluid in both ovaries have been acted upon by some influence which has caused them to develop into lutein cysts (3) That the residual cells from previous corpora lutea have been stimulated into activity and rapidly reproduced and that the resulting new growths are the lutein cysts in question

CAREY CLIBERTSON

Ilipchitz, A A Case of Primary Carcinoma of the Tube Developing after an Old Tuberculosis (Fibronidion peritoneum Tuberculinom) J dem Roentgenstr 106 1 104 Monatsh f Geb 1 h  
Gynäk 1914 xv 1 33  
By Zentralbl f d ges Gynäk Geburtsh d Grenzgeb

A 44 year-old null para in a moderately good state of nutrition complained of pain in the back and abdomen and a sensation of sinking The uterus was found fixed in retroposition the annexa not sensitive A diagnosis was made of myoma of the uterus with adhesion A paravaginal amputation of the uterus was performed and the adnexa and both broad ligaments were removed The uterus was as large as a small fist studied with intramural nodules of myoma The right tube contained a papilloma passed into a tumor the size of a hazel nut Microscopically on section of the tube typical tubercles were found inflammation of the muscularis in the deep tissues slightly atypical epithelium proliferated Section through the middle of the tumor showed the muscularis chronically inflamed and studded with tubercles and containing numerous branching papillae

The dilated lymph spaces were filled with tumor cells The papillary proliferations started from the

mucous membrane the epithelium of which showed tremendous proliferation into the lumen. Between the numerous papillae there were many epithelial nests of the nature of alveolar carcinoma and also tubercular tissue. The microscopic diagnosis showed primary papillary carcinoma of the right tube developing on an old tuberculosis growing quickly originating from the mucous membrane and infiltrating the surrounding tissues especially the musculature.

The author believes with Kehrer that the papillary form of carcinoma of the tube is a more benign predecessor of the alveolar form. This case was on the point of being transformed from a pure papillary into a papillary alveolar form. The prognosis is bad especially in cachectic cases. Only 4 cases were free from recurrence after 5 years. The best prospects for recovery are offered by performing the earliest and most extensive removal possible of the uterus and adnexa by Freund's operation. Unfortunately diagnosis is very difficult.

FALGOWSKI

**Bell W. B. A New Operation for the Treatment of Suppurative Salpingitis in Young Women**  
*S. G. J. & Obst. 94, 634*

By Surg. Gynec. & Obst.

Bell brings forward a new operation for the treatment of suppurative salpingitis in young women.

The object of the operation is to remove the diseased structures as widely as possible without interfering with the function of menstruation. He states that the fundus uteri is frequently affected and gives a photomicrographic illustration showing round celled infiltration of the musculature.

The technique is as follows:

The right tube is freed by cutting through the mesosalpinx of that side. Next the left tube and ovary are freed by cutting through the broad ligament at the junction of the mesosalpinx and meso-ovarian up to the uterus. A wedge-shaped portion of the fundus uteri is then excised by means of two incisions one of which is carried across the anterior surface of the fundus and the other crosses the fundus posteriorly. These incisions meet on the lateral walls of the uterus about half an inch below the tubes. The anterior incision is thenough to insertions of the round ligaments. These two incisions are deepened the anterior downwards and backwards and the posterior downwards and forwards until they meet in the center of the uterus. The ascending branches of the uterine arteries are caught and tied as are the other vessel in the broad ligament when they are cut through. The wedge-shaped opening in the uterus is closed by four mattress sutures which check the bleeding and bring the flaps together.

Next a continuous suture is carried across the pelvis approximating the cut peritoneal edges of the mesosalpinx on the right and the broad ligament on the left. The peritoneal edges of the uterine flaps are brought together by the same suture as it is carried from one side to the other.

3. Finally the round ligaments are attached to the stump of the uterus as is also the right ovarian ligament to prevent the ovary from becoming prolapsed.

The results of all the operations performed so far have been very satisfactory. The author refers to the fact that Beutner appears to have devised a somewhat similar operation but made no publication of it until after the author had published an account of his own.

**Stern M. A. The Non Operative Treatment of Gonorrhoeal and Septic Pus Tubes Perimetritis, and Parametritis**  
*J. A. M. J. 94, 54*

By Surg. Gynec. & Obst.

The author briefly reviews the work being done abroad in the non operative treatment of gonorrhoeal and septic pus tubes perimetritis and parametritis. In young women at the height of their sexual activity he recommends the most extended and prolonged use of non operative therapy. Ninety per cent of these cases remain free from subjective symptoms after the first year. If operation must be performed in young people, he recommends salpingectomy. In some patients this operation is a failure in women near the climacteric if the non operative treatment fails he recommends panhysterectomy as the operation of choice.

EDWARD L. CORNELL

**Lanzarini F. Large Cyst of Lymphangioma of the Right Iliac Fossa (V. l. mœux lymphangiome kystique de la fosse iliaque droite)**  
*J. d. temp. 94, 274, 43*

By Journal de Chirurgie.

The author gives a very complete case report both clinically and histologically accompanied by a bibliography. The patient was a married woman of 49 with nothing of especial interest in her personal or family history. For five years she had noticed the existence of an abdominal tumor with pain at a point 3 cm. above the middle of a line passing from the umbilicus to the anterior superior iliac spine. The only symptom was the pain which was sometimes so great as to make walking impossible. For seven months she thought that the tumor had increased in size immediately after meals. On inspection the abdomen was prominent but with no special protuberance at any point. On percussion there was dullness in the lower quadrants of the abdomen. On palpation a tumor was found occupying the iliac fossa with slight lateral movement. Some points in it seemed of woody hardness others semi fluctuating. It was difficult to move the body of the uterus. With one hand on the abdomen and the other in the vagina the nodules of the tumor could be felt in the posterior cul-de-sac of the vagina.

Laparotomy showed a tumor implanted in the pelvis in the subperitoneal cellular tissue of the right iliac fossa. It was entirely covered with peritoneum and showed some adhesions to the great omentum. The patient recovered.

Lanzarini gives a detailed account of the macroscopic, microscopic, and chemical examination and



diagnoses it as cystic lymphangioma with points of calcification. He has not the least doubt that it originated in the lymphatics of the right iliac fossa. He says a subperitoneal cystic lymphangioma of the iliac fossa has never been described before. This form of tumor is extremely rare and has only been found in the peritoneum or mesentery. The tumor which was very large weighing 5 kilograms showed calcified nodules varying in size from that of a bean to that of a pigeon's egg. Such a process of calcification has to the author's knowledge never been described before. He thinks this was a congenital tumor.

F DE RLO-BIA CO

## EXTERNAL GENITALIA

Edeberg K: Etiology of Cancer of the Vagina (Zur Ätiologie d. Schidenkrebes) Z i M f Gynäk u g xxviii 367

By Zentralbl f d. Gen. Gynäk u Geburtsh u d. Grenzgeb

A carcinoma was developed at the place where the posterior part of a pessary had lain. The patient who was 68 years old had worn a ring pessary for 25 years. It had not been removed for 12 years and could be removed only in pieces. A microscopical examination of a piece cut from the ulcer showed a flat-cell d. epithelial carcinoma. Only two similar cases have been reported.

Francey F: Treatment of Vesicovaginal Fistulae by the Transcervical Route (Cervical fistulae - Transcervical Route) J. Obst. & Gynaec. 1904

The trans cervical route in the treatment of vesicovaginal fistulae is very largely indicated in the following classes of cases: (1) When the fistula cannot easily be brought down because it is too high up or the vagina is contracted; (2) When the neck of the uterus has been impaled by the surgeon has no solid point on which to exert traction and bring the fistula down to the vulva; (3) When vaginal operation has failed; (4) When hysterectomy or hysterectomy is indicated because of the suspicion that the fistula is near the uterine orifice.

In the operation through the bladder superior to the third degree of the fistula because it gives more light on the fistula. It is very prolong the exposure of the fistula. It is very external to the third degree of the fistula. The least advantage is that it is placed at rest after the operation by hypogastric drainage.

The technique of the operation is very simple and a plate is placed in the vagina because it gives more light on the fistula. It is very prolong the exposure of the fistula. It is very external to the third degree of the fistula. The least advantage is that it is placed at rest after the operation by hypogastric drainage.

bladder with destruction of the sphincter. The operation has given complete success at a single operation in about 60 per cent of the cases.

GISTO PICOR

Schmidgall G: Bacteriological Examination of the Vaginal Flora of New Born Girls (Bakteriologische Untersuchung über die Scheidenflora neugeborener Mädchen) B i z Geburtsh Gynäk 1904

By Zentralbl f d. Gen. Gynäk u Geburtsh u d. Grenzgeb

Twenty-one infants were examined immediately after delivery and to children under a year of age. The vaginal secretion was transferred to Schott Müller's blood agar plates. It was shown that the bacteria enter the vaginal secretion during the first few days of life. Generally colonies developed after the second day. The bacilli most frequently found were streptococci, staphylococci, colon bacilli and vaginal bacilli. Rarely gram negative colon like rods, micrococci, tetragoni, different strains of saccharomyces, anaerobic streptococci, staphylococcus parvulus, bacillus haemophilus, and bacillus bifidus.

The secretion of the infant's vagina does not show any inhibitory effect on the growth of pyogenic bacteria. Hemolysis was acquired and lost during the course of the examinations and seems to be a variable fermentative quality of the bacteria which is an expression of increased life energy in an individual strain. It is very probable that the flora of the mother influences the secretion of the child. The frequency of streptococci shows that the medium is important.

The intestinal bacteria influence the vaginal flora very little for the first few days. Bacillus bifidus the typical bacillus found in the nursing's stools was never found in the vagina of the newborn. In the older children the intestinal bacteria made up a half of the vaginal ones. The results indicate that there is no auto-cleaning of the vagina.

STOLZ

## MISCELLANEOUS

Von Graff E: Basedow's Disease as a Contraindication to Cynecological Röntgen Treatment (Die Basedow'sche Krankheit als Kontraindikation gegen gynäkologische Röntgenstrahlung) B i z Geburtsh Gynäk 1904

By Zentralbl f d. Gen. Gynäk u Geburtsh u d. Grenzgeb

The author observed in many cases where myomata of the uterus were treated by roentgen rays that symptoms of Basedow's disease were manifested after the treatment. He therefore comes to the conclusion that roentgen treatment should not be used when there are the slightest signs of a thyroid disease. Small doses of roentgen rays will probably have no effect in the Basedow's disease but large doses which temporarily exclude the function of the ovaries will lead to the thyroid disease. Basedow's disease where there is a predisposition and will also have an unfavorable effect on a ready thyroid disease.

Opitz, E. Treatment of Sterility in the Female  
(Über Behandlung der weiblichen Unfruchtbarkeit)  
*Therap. d. Gyn.* 1914, IV, 4  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In half the cases the man is responsible and in probably 10 per cent of the cases there is absence or death of the spermatozoa. Often the men are the last born in families with numerous children so it is possible that they have not inherited sufficient vitality. In primary sterility of the woman constitutional causes congenital and acquired are emphasized. Anemias are of great importance also obesity which may be of thyroid origin. Two cases were successfully treated with iodothyron. Infantism is important but acute anteversion is a normal condition in the virgin.

In dysmenorrhoea general treatment should be tried first only in older persons should the cervix be dilated and a Fehling's glass tube inserted until after the next menstruation. Among local causes he mentions the obscure cases in which pregnancy occurs after the removal of a small unilateral ovarian tumor. He operated on the tube three times without success. In one case an abnormally long tube seemed to have caused repeated tubal pregnancies with early abortion and therefore childlessness. Normal pregnancy occurred after resection of a piece of the tube in which the remnants of an ovum were found. If there is tough mucus in the cervix the cervical mucous membrane should be cauterized and general treatment given especially for constipation. Opitz has had no opportunity for artificial impregnation. Secondary sterility is much more unusual, treatment is seldom possible and rarely desired. There are often constitutional causes for repeated abort on. First general treatment should be given and then according to Lomer potassium iodide 0.5 per day and iron. Syphilis is less frequently responsible when it is premature delivery generally occurs. In such cases mercury should be given during pregnancy. KERNAUER

Kakuschkin, N. M. Exploratory Puncture as a Method of Treatment in Gynecology (Die Probepunktion als Heilmittel in der Gynäkologie)  
*Ztsch. f. Geb. u. Gyn.* 1914, 94, 122, 597  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Exploratory puncture of the posterior vaginal vault has not only diagnostic but therapeutic value. It is best performed over the finger with a speculum holding back the anterior vaginal wall. Very frequently after the exploratory puncture of pelvic exudates and filtrations the temperature falls and the inflammatory products are absorbed. These favorable changes are due less to the emptying out of small quantities of exudate than to changes in the circulation analogous to Bergh's peremias. With a suggestion of the favorable results of puncture in other fields of medicine and surgery the author recommends this procedure in the treatment of old intraperitoneal and extra-peritoneal exudates. GRANTZKE G.

Bachrach, M. Assimilation Pelvis at the Heidelberg University Gynecological Clinic (Die Assimilationsbecken der Heidelberger Universität-Frauenklinik)  
*Ztsch. f. Geb. u. Gyn.* 1914, 94, 122, 597  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The form of pelvis known as assimilation pelvis arises from disturbances in the embryonic development of the bones forming the pelvis. That is, the vertebrae forming the sacrum and the ilium. Normally in the fetus there are 3 vertebrae and the synostosis to form the sacrum begins at the twenty-sixth. But varying numbers of vertebrae may be assimilated the synostosis beginning sometimes as high as the twenty-fourth or as low as the twenty-eighth whence arise the various forms of assimilation pelvis. Many of these pelvis have no pathological significance in obstetrics and therefore escape diagnosis and are only recognized on exact measurement by their configuration and proportions. There are five types: (1) the high (2) the transversely contracted (3) the flat middle pelvis in which there is a shortening of the conjugata media (4) the low and (5) the asymmetrical.

The most frequent forms are the asymmetrical and the high the latter being characterized by the high position of the promontory and slight inclination of the pelvis. The low form shows a low position of the promontory and a marked transverse concave bend of the sacrum.

The author describes cases from the specimens at the Heidelberg Clinic with exact measurements and description of the anatomical characteristics. He describes 4 high symmetrical 4 low symmetrical 3 high asymmetrical pelvis 4 combined forms of high low and asymmetrical as assimilation pelvis based on specific bone diseases rickets and osteomalacia and 2 sacra that belong to such pelvis. The assimilation pelvis cannot be regarded as directly pathological it represents only the reaction to a pathological condition. SEIMO

Moos, S. Experience in Intravenous Injection of Arthogen in Gonorrhoea in Women (Erfahrung über intravenöse Arthogeninjektionen bei der Gonorrhoe de Weibchen)  
*M. tsch. f. Geburtsh. u. Gyn.* 1914, 94, 122, 597  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In 3 cases intravenous injections of arthogen were used for diagnostic purposes. There is a certain value in intravenous injection of arthogen but the findings in women are not so constant that any absolutely certain conclusions can be drawn from them. After the intravenous injection of 0.05 ccm which is the best dose for women a rise of temperature of 5 degrees indicates that there is probably a gonorrhoeal process present a rise of 2 degrees makes it much more probable. In 47 cases intravenous injection of arthogen was used for therapeutic purposes. The method shows no marked advance over intramuscular vaccination and the treatment previously in use. BLANCH

# OBSTETRICS

## PREGNANCY AND ITS COMPLICATIONS

**Orloff A N:** Etiology of Extra Uterine Pregnancy  
(Zur Ätiologie der Ekt. teri graviditat) Ver  
h. n. d. d. x. P. 5. f. Kong. St. Petersburg 1913 1,  
53  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Extra uterine pregnancy is as common among the peasantry of Russia as among the city dwellers. The most frequent causes are inflammatory diseases of the adnexa and pelvic peritoneum from abortion puerperal infection, and appendicitis. The mechanical theory that the migration of the ovum is hindered by inflammatory processes or congenital hypoplasia does not explain all cases of extra uterine implantation. If the adnexa are unchanged the cause of the extra-uterine pregnancy must be sought in the ovum itself. Excessive migration of the ovum is rarely the cause of extra uterine pregnancy. Lactation atrophy of the tubes in long continued nursing is a frequent cause. Diagnosis is easy from the history and findings. Exploratory puncture is only rarely demanded. The best treatment is removal by laparotomy. WAXBERG.

**Grusd Jew W S:** Extra Uterine Pregnancy (Z. Frage der Ekt. teri graviditat) Verh. d. d. x. P. 5. f. Kong. St. Petersburg 1913 u. 438  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Alderhalden's pregnancy reaction fails in the differential diagnosis of extra uterine pregnancy. In three cases where a diagnosis of extra uterine pregnancy was made from the history and the local findings the reaction was positive. The diagnosis was confirmed by operation in only two of the cases. In the third case only inflammatory changes were found. A case of bilateral tubal pregnancy is reported both ova were from one ovulation period. In one tubal abortion had taken place early while in the other pregnancy had persisted three months. It was complicated with appendicitis. The operation was begun by posterior colpotomy but anatomical changes and copious hemorrhage compelled the application of a tampon and the continuance of the operation by laparotomy. A case of torsion of the pedicle in tubal pregnancy is reported. Torsion of the pedicle may cause tubal abortion. It may cause secondary hemorrhage after death of the ovum or reactive peritonitis with swelling of the tumor. WAXBERG.

**Mapes, C. C.** Ovarian Gestation. Am. J. S. G. 914 xxviii 9. By Surg. Gynec. & Obst.

Mapes in his article extensively reviews the literature on ovarian gestation and gives several case reports from the literature.

In his opinion ovarian gestation occurs probably more frequently than is usually believed. He is inclined to believe that "blood cyst" of the ovary rupture of the ovary and pelvic hematocele may have for their etiology ovarian gestation.

E. GEYER CARL

**Druskin S. J.** Extraperitoneal Cesarean Section with Report of a Case. J. Am. M. A. 914 lxx, 383. By Surg. Gynec. & Obst.

The author reports a case in which the patient a primipara aged 21 with a generally contracted pelvis had been in labor sixty three hours before the operation. The extraperitoneal method was indicated as the membranes were ruptured and there had been several vaginal examinations.

The technique which the author follows is the combined Latsko-Sellheim method. The underlying principle is the separation of the bladder to one side (Lat. Lo) and the separation of the placenta upward (Sellheim). While this operation is more difficult and more time consuming than the classical operation neither mother nor child suffers through the longer time consumed. The author believes that the patients suffer less after this type of operation. Its chief advantages are: (1) Lessened bleeding (2) non-e position of the peritonium (3) lessened danger of post-operative hernia and (4) the fact that the extraperitoneal section can be performed when it would no longer be safe to do the classical operation. C. H. D. is

**Münberger L.** Study of Placenta Praevia Especialy Placenta Praevia Accreta (Zur Kenntnis d. Placenta praevia speciell der placenta praevia accreta) Prakt. E. f. d. G. u. Geburtsh. G. 2. 1. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author presents two cases. In the first case the uterus was removed in the third month of pregnancy for subserous myoma. A distinct isthmus could be demonstrated both macroscopically and microscopically. The upper third of the cervical canal showed typical decidual transformation. Between this part and the beginning of the cervical mucosa, which was sharply marked off there was a zone without decidual transformation but showing the characteristic changes of pregnancy: the glands which the cervical glands nevertheless (2) In case of isthmus-cervix pregnancy there are intimate adhesions of the placenta with the anterior wall of the isthmus and the cervical canal. Macroscopic examination showed absence of the sponginess of the decidua splitting of the muscular connective tissue hyperplasia and excessive proliferation of chorionic elements: the myometrium.

The abnormal insertion of the ovum and the extensive chorionic invasion alone could not have caused the extreme degree of adhesion between the placenta and the wall of the uterus as is shown by a comparative study of the conditions in other placenta prævia cases and in tubal pregnancy. We must agree with Baisch in considering the great changes described above in the decidua and uterus on which the normal mechanism of the separation of the placenta depends as responsible for the origin of placenta accreta. Moreover the deposition of chorionic elements in the normally close texture of the myometrium leads to a change in its statics and therefore to hypofunction. The advanced parenchymatous degeneration of the myometrium is probably explained by the chemical fermentative effect of the chorionic epithelium.

BISCHOFF

Reinhardt E. Danger of Tamponing in Placenta Prævia (Über die Gefahren der Tamponade bei Placenta prævia) *Zentr. Bl. f. G. u. A.* 94 xxxvi 68

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

Among 276 cases of placenta prævia treated during the last ten years at the Dresden Gynecological Clinic 11 were admitted to the hospital after being tamponed. Generally the tampon was applied by the physician and the patient brought immediately to the hospital. Immediately after admission 4 to 8 hours after the tampon was applied it was removed. Forty-one per cent of the cases were admitted with tampons, 53 per cent without tampons the total morbidity was 42 per cent the total mortality 2 per cent. Of the non febrile cases 47 per cent were tamponed 66 not tamponed. Of the febrile cases 3 per cent were tamponed 34 per cent not tamponed. Of those who died of sepsis 5 or 4.5 per cent were tamponed 10 or 7 per cent were not tamponed.

The morbidity and mortality in the tamponed cases is not really higher but tamponing and infection are not synonymous terms. With very threatening hæmorrhage and the os almost or entirely closed the tampon cannot always be avoided in practice. In moderate hæmorrhage examination should be made externally or rectally not vaginally. Aided the woman taken to the hospital without tamponing 15 gr of morphine should be injected to decrease the activity of the pains. If with moderate hæmorrhage placenta prævia is not demonstrated it would be a great mistake to tampon. If tamponing is absolutely necessary it should be done with as careful asepsis as an obstetrical operation. Sterile gauze should be used that has been dipped in a mild permanganate or lum solution.

V. FESSEY

Ebeler F. Tuberculosis and Pregnancy (T bei Lulose und Schwangerschaft) *Prakt. Eg. b. d. Geb. r. k.* Gyn. 94 vi 87

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

The literature of the present status of the question of tuberculosis and pregnancy is reviewed

especially the different and frequently opposed views of individual authors in regard to abortion for tuberculosis. Thirty-two cases of manifest tuberculosis with pregnancy are described. The author recommends abortion unconditionally in every stage of tuberculosis and in every month of pregnancy. The prospects in the third stage of tuberculosis are very bad. In three-fourths of his cases in the first and second stages the author saw a marked improvement in the objective lung symptoms. He thinks the best method of interruption of pregnancy and sterilization is vaginal amputation of the body of the uterus not vaginal total extirpation as recommended by Bumm. After the abortion sanitarium treatment is indispensable.

DREWS

Wobus, R. E. Pyelitis Complicating Pregnancy *J. Miss. & St. M. Ass.* 94 46

By Surg. Gynec. &amp; Obst.

Pyelitis and pyelonephrosis are often overlooked either through lack of careful examination or through ignorance of the existence of this uncommon condition. They have not received the attention they deserve. After discussing the subject from the clinical standpoint and taking up the treatment the author comes to the following conclusions:

Pyelitis is not an infrequent complication of pregnancy.

2 Its diagnosis is often overlooked at any rate early.

3 In most cases it can be held in abeyance by means of urinary aseptics properly administered.

4 Many cases of so called pyelitis of pregnancy are simply old cases of urinary infection which have become active on the addition of the added factor of pregnancy and should be considered so until proved otherwise.

EDWARD L. CORNELL

Duham J. G. Gall-Stones Complicating Pregnancy — Six Cases *S.thern M. J.* 94 1139

By Surg. Gynec. &amp; Obst.

Graham briefly discusses the occurrence of gall stones in women during pregnancy and the puerperium. He considers the symptomatology, diagnosis and treatment. In the treatment the proper course to follow is to disregard the pregnancy and treat the patient according to the gall stone indications. Mild cases can be tidied over by medical treatment but if the gall stone symptoms become urgent it is necessary to operate at once. Thus the gall bladder accompanied by chills, fever, pain and jaundice will produce miscarriage. The operation itself is no more likely to produce miscarriage than any other abdominal operation. The surgeon may be called upon to perform during pregnancy.

The author reports three cases complicating pregnancy and three complicating the puerperium. In those cases complicating pregnancy one patient died following rupture of the gall bladder while the other two recovered and went on to full term. The three cases occurring during the puerperium all

recovered from the operation one of them however developed attacks of biliary colic three months later due to a stone which was floating in the common duct. Operation two years later was followed by uncontrollable hemorrhage on the second day with death.

**Saunders, C. A :** *The Management of Pregnancy Labor and the Puerperium* 1123 31 Sm  
Month 94 N 60 By Surgynec & Obst

The author gives a general discussion of his care of the pregnant woman and submits the following data. He has 114 red 235 multiparae and 121 primiparae of these 7 were negroes. He has used forceps 16 times. There were 17 tears of the perineum requiring from three to seven stitches and 3 complete tears. There were 7 blue bluiies and 5 stillborn. The hand was inserted in the uterus 3 times. He reports 8 pairs of twins. There was a slight post partum hemorrhage in two cases. One mother died rather suddenly on the twelfth day the cause of death not being given. He had no cases of sepsis, ophthalmia, monstorum, abscess of the breast, cracked nipples, fissured nipple, or mastitis. He has had no eclampsia.

**Schaute P** Ovarian Tumors and Pregnancy (Ovarian und Gravidität) Wien med Wochenschr 1914

By Zentralbl f d ges Cynik u Geburtsh s d Kreuzeb

Every ovarian tumor that is discovered should be removed by operation because of the large percentage of malignant degeneration. The occurrence of pregnancy does not alter this rule. The frequency of ovarian tumors and the rarity of pregnancy occurring with them is such that the tumor is not prevented by pregnancy. During pregnancy they grow rapidly like all tumors. They may cause abortion because of limiting the space for the growth of the uterus. They may rise out of the true pelvis and depend on their mobility. If they do not rise in account of adhesion they may interfere with labor or may rupture. This danger may be avoided by performing cesarean section emphasizing the tumor by puncture or by early reposition. The latter is often impossible because of the adhesions and dangerous because apt to be complicated by hemorrhage. In the puerperium a uterine infection may extend to the tumor and cause septic discharge. Therefore ovarian cysts that are discovered during labor should be removed during the puerperium even if they cause no symptoms.

**Piscac k L:** Di erticulum of th Uterus and its  
Relation to Pregnancy (Čbe Uterus d ruel  
ad hre New h ng Schwangerschaft) Gy sk  
R d k 94

Itz Zentralbl f d ges Gynak      Geburtsh      d. Grenzgeb

A 45 year old VII para died of rupture of the uterus mm distally below the contraction ring. The pelvis was normal. In her six preceding deliveries the placenta had been separated manually. In the

specimen 4 cm from the entrance of the left tube there was a projection the size of a cherry with walls as thin as paper. The surface was formed by peritoneum and there was a crater shaped defect in the uterine muscle corresponding to its inner surface. Near the entrance of the right tube there was another projection corresponding to a shallow depression on the inside of the uterus. Neither of these places corresponded to the insertion of the placenta which was 4 or 5 cm away from them.

The author could not find any cases in the literature that were similar anatomically and in which there was intra uterine pregnancy. Bruce 1949 reported a case that was similar clinically. A 11 para had a placenta previa with a transverse presentation on external palpation and it felt as if the arm of the fetus was projecting out of the fundus uteri and a grip was found in the uterine muscle between the two finger tips. The author believes that his case of diverticulum was caused by the removal of a piece of the muscle wall in one of the previous separations of the placenta. The vascular projection was an artificial product of the puerperal retraction of the wall of the uterus.

Undisturbed intra uterine pregnancy is a rare change in diverticulum of the uterus. Thus far six cases have been described. The other discusses symptoms, diagnoses a anatomical findings in the individual cases. He regards Schuckle's case as undoubtedly a case of diverticulum pregnancy while Freund's and Hellenhals's were excess of diverticulum like projections of the fundus and Späth and Barchet only assumed a diverticulum pregnancy.

## LABOR AND ITS COMPLICATIONS

Gillespie W Th Problem of Using Oxytocic  
Drugs During Labor *Lancet* 1942  
573 By Surg Gynec & Obst

In this paper the author opposes the use of oxy-  
toxic drugs generally and a habit test procedure very  
a more rational procedure when interference is  
necessary

It emphasizes the fact that the uterine anuses are very much larger than the vessel feeding them and that the rhythmic uterine contractions from the time of conception to delivery are about 1/3 necessary to the life of the fetus. Consequently, toxic drugs all of which cause more or less disturbance in this alternate contraction and relaxation of the uterine musculature are dangerous to the life of the child. They may also be responsible for rupture of the uterus as well as severe lacerations of the perineum. On the other hand, the instrument is in the hands of an intelligent man are

360 cases of eclampsia. The treatment began with chloroform narcosis and the administration of large doses of morphine and chloral by Von Leit's method, then accepting the placental theory of the cause of eclampsia, the treatment was changed to early and rapid delivery. Dührssen's vaginal caesarian section giving the best results. It must be remembered that the results of this method depend not on the number of attacks but on the time which has elapsed between the first attack and the delivery.

Stroganoff's method resembles a return to Von Leit's. It is a prophylactic method the chief point of which is to guard against further attacks occurring rather than to treat during the attack. Schüller modifies this expectant treatment by emphasizing the importance of the primary blood letting as a curative measure. According to Schüller's experience there is still a balance between the active and expectant methods of treatment as in every case there are numerous factors to be taken into consideration that may decide for the one or the other method. Extreme measures are successful only in exceptional cases. In eclampsia as in other things, the middle course is safest.

BAILEY.

Seilgmann S. Etiology of Endogenous Puerperal Infection (Zur Ätiologie der endogenen Puerperalinfektion). *Ztschr. f. Geburtsh.* G) 41 1914 xxv 548

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In 1911-1912 Goldstrom made bacteriological examinations of a series of vaginal secretions and in 1912-1913 Seilgmann made accurate tables of a series of cases confirming Goldstrom's results that is that it makes no difference in the prognosis of the puerperium whether there are streptococci present in the lower third of the vagina during labor or not when examination is exclusively rectal. Also the number of streptococci in the vaginal secretion of parturient women and whether they are hemolytic or not makes no difference as shown by these examinations. Since in women examined only per rectum neither the presence nor the number of gonococci influences the course of the puerperium other factors must be sought in the causation of endogenous puerperal infection. BAILEY

Dubitschenko, L. Puerperal Staphylococcus Septicæ (Über puerperale Staphylokokkenpyæmie). *J. Ak. d. Wiss. St. Petersburg* 94 1914 45

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Based on the reports in the literature and his own material of 5 cases in 4 of which staphylococcus aureus or albus could be demonstrated in the blood the author comes to the following conclusions: (1) General staphylococcus infection is much more frequent than has been supposed. (2) A single positive blood examination does not indicate a severe infection. It takes several positive findings to make the prognosis serious. (3) In severe cases of general infection hemolytic staphylococci have almost always been found. (4) In the human body staphy-

lococci can very quickly acquire hemolytic properties.

Telfair J. H. Complete Inversion of the Uterus Following Delivery. *Y. J. G. 4* 1914 331

By Surg. Gynec. & Obst.

The author reports a case of complete inversion of the uterus in a primipara who was delivered of a full term child ten hours before admission to the hospital. Her condition was so desperate that saline infusion, Murphy drip, and stimulants were given previous to operation. Under an anesthetic it was impossible to dilate the cervical constriction through the abdominal wall, and by start of pressure upward on the right lateral wall of the uterus it was possible to gradually replace the uterus. The uterus was then packed with gauze. The patient left the hospital on the third day against advice and died on the seventh day after delivery.

C. H. Davis

Kreiss, P.: The Treatment of Post Partum Hemorrhage by the Intravenous Injection of Hypophysin (Die Bekämpfung der post partalen Blutungen durch intravenöse Hypophysin-Injektion). *Zentr. Bl. f. G.* 41 94 xxxi 11, 9

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Based on his conclusions on 30 cases, Kreiss recommends the intravenous injection of hypophysin for the treatment of post partum hemorrhage. The initial dose is 0.5 to 1 ccm for most people 0.5 ccm is enough. The injection should be made as slowly as possible. Collapse following it need not be feared. The patients recover quickly. The effect appears quickly even while the injection is being given. Kreiss also recommends its combination with ergotin preparations which has also been recommended by other authors. A further advantage of hypophysin is that the composition is always the same and therefore the effect is always the same. In conclusion he condemns tenosin which he thinks is a dangerous preparation, although it is chemically purer than it formerly was. FRAK.

## MISCELLANEOUS

Meyer-Rüegg, H.: Fertilization and Implantation of the Human Ovum (Eingangsüber Befruchtung und die Bildung des menschlichen Eies). *Cor. Bl. f. Schweiz. Ärzte* 94 24 57

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The article contains a exact description of the anatomical structure of the ovaries, ovulation, the structure of the interstitial ovarian glands, the function of the corpus luteum, the anatomical structure of the uterine mucous membrane and the changes in it during menstruation and implantation. There is a discussion of the relation between ovulation and menstruation, and the different processes that take place in impregnation, migration, and implantation of the fertilized ovum. The different possibilities are reviewed that may lead to irregu-

lanties in the development of the pregnancy whether they take place in the migration or the implantation. In conclusion, a detailed description of Abderhalden's pregnancy reaction is given the practical value of which in human medicine is doubted the question of chorio-epithelioma is also touched upon

FRANK STEIN

Sheil S Congenital Icterus *Lancet* Lond 9 4  
clxx 3 6 By Surg Gy ec & Obst

The author reports a case of congenital jaundice in which an operation was performed for its relief without success. The mother had given birth to two children previously both of which died from jaundice in a few days. During pregnancy the mother had complained of pain in the epigastrium which was frequent and annoying. Her condition had been diagnosed by others as appendicitis gall stones etc. After an easy delivery she complained little of her pain. The infant developed jaundice within a few hours after birth and steadily grew worse. It was operated on within forty-eight hours after birth and the gall tracts were found to be intact and patent. The gall bladder was found to contain a very viscid bile which could not flow through the lumen of the ducts. The bladder was drained but the infant died within nine hours.

The treatment of this form of jaundice is early operation but there is always the difficulty of recognizing the obstruction sufficiently early to ensure a good result for the signs and symptoms are so similar to those of simple or pseudojaundice that the affection may have progressed beyond the possibility of recovery before the obstruction is suspected and a dilated gall bladder cannot always be palpated with certainty. Moreover the obstruction is not always amenable to operation as the process may have spread deeply through the liver itself. The family history of these cases helps but little and it is the same with the familial obstructive form of jaundice—a rare form the pathology of which is far from being clearly understood.

EDWARD L. CORVELL

Blair V P The Treatment of a Case of Birth Fracture of the Shaft of the Femur *Surg Gynec & Obst* 9 4 2 640

By Surg Gynec & Obst

For the treatment of a birth fracture of the femur the author presents a satisfactory splint cut of galvanized steel of the weight used for horse gutters.

There is a body portion reaching from the greater trochanter of the femur to the axilla and encircling the back and both sides fitting fairly close. A small buttress maintains the stability of the body portion by resting squarely on the bed. The thigh portion corresponds with the normal position of a baby's thigh flexed on the abdomen. The leg part of the splint is longer than the infant's leg, parallel with the bed and its lower border is bent mesially to form a small shelf.

The splint is heavily padded and the baby is laid

in the body portion resting there simply by its weight while the thigh and leg after being covered with cotton are bandaged to the splint. This is removed and reapplied every day at the time the baby is bathed and powdered the nurse requiring some one for the first few days to hold the injured limb in position.

The baby upon whom this was tried suffered no inconvenience and in four weeks the union was firm and in excellent position.

Klotz R: A Case of Acardiac Anencephalus with Partial Absence of Both Muller's Ducts (Ein Fall von Acardius anencephalus mit partiellem Defekt beider Müllerschen Gänge) *Arch f Gynak* 9 4, 1 537

By Zentralbl f d ges Gynak u Geburtsh u Grenzgeb

The length of the specimen was 15 cm. The head and upper extremities were lacking—holocardiac acephalus talipes equinovarus was present on both sides there were irregularities in the toes only the 7 lower ribs were present and they were rudimentary above the seventh thoracic vertebra there was only a bone 1 cm long not divided into vertebrae the spinal cord being present up to this place the large intestine was short opening outward normally the vermiform appendix was present of the small intestine there was only a piece 2 mm long back of the peritoneum there was a horse shoe kidney opening downward the ureters were normal on both sides along the spinal cord were large arteries and veins and between them an organ half as large as a pea that could not be recognized even microscopically. There were three esels in the umbilical cord and there were ovaries on both sides as shown by microscopic examination. Laterally the tubes extended as solid cords fine cords extending from the ovary represented the ovarian ligament which disappeared in the caudal direction macroscopically nothing could be seen of the round ligament the vesico-rectal pouch was very deep the bladder was small the external genitalia were feminine there was no vagina no müllerian ducts could be found and the pelvis was normal in the roentgen picture.

The author believes this is the first case of almost total absence of both müllerian ducts and thinks this is to be explained by the early destruction of the wolffian duct. The acardia is explained by amniotic adhesions.

KERMAUER.

Lejbowitsch J The Frequency of Giant Children and Their Significance in Obstetrics (Die Häufigkeit und geburtshilfliche Bedeutung der Riesenkinder) *Motsch f Geburtsh Gynak* 9 4 XXXIX 6

By Zentralbl f d ges Gynak u Geburtsh u Grenzgeb

Some authors have designated as giant children all those weighing over 4000 gms although their birth does not generally show the characteristics peculiar to the delivery of giant children. The author proposes to designate children weighing over 4400 gms as abnormally large and those

360 cases of eclampsia. The treatment began with chloroform narcosis and the administration of large doses of morphine and chloral by Von Veit's method, then accepting the placental theory of the cause of eclampsia, the treatment was changed to early and rapid delivery. Dührssen's vaginal caesarean section giving the best results. It must be remembered that the results of this method depend not on the number of attacks but on the time which has elapsed between the first attack and the delivery.

Stroganoff's method resembles a return to Von Veit's. It is a prophylactic method the chief point of which is to guard against further attacks occurring rather than to treat during the attack. Schüller modifies this expectant treatment by emphasizing the importance of the primary blood letting as a curative measure. According to Schüller's experience there is still a balance between the active and expectant methods of treatment as in every case there are numerous factors to be taken into consideration that may decide for the one or the other method. Extreme measures are successful only in exceptional cases. In eclampsia as in other things the middle course is safest.

BAYER

Seligmann S. Etiology of Endogenous Puerperal Infection (Zur Ätiologie der endogenen Puerperalinfektion). *Zentralbl f Gynäk u Geburtsh.* 94, 1913, 548.

By *Zentralbl f d. ges. Gynäk. u. Geburtsh.* d. Grenzgeb.

In 1911-1912 Goldstrom made bacteriological examinations of a series of vaginal secretions and in 1912-1913 Seligmann made accurate tables of a series of cases confirming Goldstrom's results that is that it makes no difference in the prognosis of the puerperium whether there are streptococci present in the lower third of the vagina during labor or not when examination is exclusively rectal. Also the number of streptococci in the vaginal secretion of parturient women and whether they are hemolytic or not makes no difference as shown by these examinations. Since in women examined only per rectum neither the presence nor the number of gonococci influences the course of the puerperium, other factors must be sought in the causation of endogenous puerperal infection.

BAYER.

Bublitshenko L. Puerperal Staphylococcus Septis (Über puerperale Staphylokokkensepsis). *J. Akk. u. Nsk. Bol. St. Petersburg* 9, 4, 1913, 43.

By *Zentralbl f d. ges. Gynäk. u. Geburtsh.* d. Grenzgeb.

Based on the reports in the literature and his own material of 5 cases in 4 of which staphylococcus aureus or albus could be demonstrated in the blood the author comes to the following conclusions: (1) General staphylococcus infection is much more frequent than has been supposed. (2) A single positive blood examination does not indicate a severe infection; it takes several positive findings to make the prognosis serious. (3) In severe cases of general infection hemolytic staphylococci have almost always been found. (4) In the human body staphy-

lococci can very quickly acquire hemolytic properties.

HELV.

Telfair J. H. Complete Inversion of the Uterus Following Del. very V. F. M. J. 9, 4, 1913, 88.

By *Surg. Gynec. & Obst.*

The author reports a case of complete inversion of the uterus in a primipara who was delivered of a full-term child ten hours before admission to the hospital. Her condition was so desperate that saline infusion, Murphy drip and stimulants were given previous to operation. Under an anesthetic it was impossible to dilate the cervical constriction through the abdominal wall and by starting pressure upward on the right lateral wall of the uterus it was possible to gradually replace the uterus. The uterus was then packed with gauze. The patient left the hospital on the third day against advice and died on the seventh day after delivery.

C. H. DAVIS

Kreiss P. The Treatment of Post Partum Hemorrhage, by the Intravenous Injection of Hypophysin (Die Behandlung der postpartalen Blutungen durch intravenöse Hypophysin-Injektion). *Zentralbl f. Gynäk.* 9, 4, 1913, 19.

By *Zentralbl f. d. ges. Gynäk. Geburtsh.* d. Grenzgeb.

Based on his conclusions on 30 cases, Kreiss recommends the intravenous injection of hypophysin for the treatment of post-partum hemorrhage. The individual dose is 0.5 to 1 ccm. for most people 0.5 ccm. is enough. The injection should be made as slowly as possible. Collapse following it need not be feared. The patients recover quickly. The effect appears quickly even while the injection is being given. Kreiss also recommends its combination with ergotin preparations which has also been recommended by other authors. A further advantage of hypophysin is that the composition is always the same and therefore the effect is always the same. In conclusion he condemns tetosin which he thinks is a dangerous preparation, although it is chemically purer than it formerly was.

FRAN.

# MISCELLANEOUS

Meyer-Ruegg, H.: Fertilization and Implantation of the Human Ovary (Ein Fall von Befruchtung und Einbettung des menschlichen Eies). *Cor. Bl. f. Gynäk. u. Geburtsh.* 9, 4, 1913, 57.

By *Zentralbl f. d. ges. Gynäk. Geburtsh.* d. Grenzgeb.

The article contains an exact description of the anatomical structure of the ovaries, ovulation, the structure of the interstitial or man glands, the function of the corpus luteum, the anatomical structure of the uterine mucous membrane and the changes in it during menstruation and implantation. There is a discussion of the relation between ovulation and menstruation, and the different processes that take place in impregnation, migration and implantation of the fertilized ovum. The different possibilities are reviewed that may lead to irregularities.



lancies in the development of the pregnancy whether they take place in the migration or the implantation. In conclusion a detailed description of Abderhalden's pregnancy reaction is given the practical value of which in human medicine is doubt of the question of chorio-epithelioma; also touched upon

FRANKENSTEIN

Sheil S. Congenital Icterus. *Lancet* L. nd 1914  
cxviii. 136 By Surg. Gynec. & Obst.

The author reports a case of congenital jaundice in which an operation was performed for its relief without success. The mother had given birth to two children previously both of which died from jaundice in a few days. During pregnancy the mother had complained of pain in the epigastrium which was frequent and annoying. Her condition had been diagnosed by others as appendicitis, gall stones etc. After an easy delivery he complained little of her pain. The infant developed jaundice within a few hours after birth and steadily grew worse. It was palpated on within forty-eight hours after birth and the gall tracts were found to be intact and patent. The gall bladder was found to contain a very acid bile which could not flow through the lumen of the ducts. The bladder was drained but the infant died within nine hours.

The treatment of this form of jaundice is early operation but the case is always the difficulty of recognizing the obstruction sufficiently early to ensure a good result. For the signs and symptoms are so similar to those of simple or pseudotumescence that the affection may have progressed beyond the possibility of recovery before the obstruction is suspected and a dilated gall bladder cannot always be palpated with certainty. Moreover the obstruction is not always amenable to operation as the process may have spread deeply through the liver itself. The family history of these cases helps a little and it is the same with the familial obstructive form of jaundice—a rare form the pathology of which is far from being clearly understood.

EDWARD L. CORLETT

Blair V. P. The Treatment of a Case of Birth Fracture of the Shaft of the Femur. *J. Gynec. & Obst.* 94 64

By Surg. Gynec. & Obst.

For the treatment of a birth fracture of the femur the author presents a satisfactory plant cut of galvanized steel of the weight used for house gutters.

There is a body portion eaching from the greater trochanter of the femur to the axilla and enveloping the back and both sides fitting fairly close. A small buttress maintains the stability of the body portion by resting squarely on the bed. The thigh portion corresponds with the normal position of a baby's thigh flexed on the abdomen. The leg part of the plant is longer than the infant's leg parallel with the bed and its lower border is bent medially to form a small shelf.

The splint is heavily padded and the baby is laid

in the body portion resting there simply by its weight while the thigh and leg after being covered with cotton are bandaged to the splint. This is removed and reapplied every day at the time the baby is bathed and powdered the nurse requiring some one for the first few days to hold the injured limb in position.

The baby upon whom this was tried suffered no inconvenience and in four weeks the union was firm and in excellent position.

Klotz R. A Case of Acardiac Anencephalus with Partial Absence of Both Müller's Ducts. (*Ein Fall von Anencephal mit partieller Defektheit der Müller'schen Gänge*) *Arch. f. Gyn. & G.* 94 437

By Zentralbl. f. d. ges. Gyn. u. Geburtsh. d. Grenzgeb.

The length of the specimen was 15 cm. The head and upper extremities were lacking—holocardiac acephalus talipes equinovarus was present on both sides there were irregularities in the toes only the 7 lower ribs were present and they were rudimentary above the seventh thoracic vertebra there was only a bone 1 cm long not divided into vertebrae the spinal cord being present up to this place the large intestine was short opening outward normally the vermiform appendix was present of the small intestine there was only a piece 2 mm long back of the peritoneum there was a horse shoe kidney opening downward the ureters were normal on both sides along the spinal cord were large arteries and veins and between them an organ half as large as a pea that could not be recognized even microscopically. There were three vessels in the umbilical cord and there were ovaries on both sides, as shown by microscopic examination. Laterally the tubes extended as solid cords fine cords extending from the ovary represented the ovarian ligament which disappeared in the caudal direction macroscopically nothing could be seen of the round ligament the vesicorectal pouch was very deep the bladder was small the external genitalia were feminine there was no vagina no müllerian ducts could be found the pelvis was normal in the roentgen picture.

The author believes this is the first case of almost total absence of both müllerian ducts, and thinks this is to be explained by the early destruction of the wolffian duct. The acardia is explained by amniotic adhesions.

KERMAUNE

Lejbowitch J. The Frequency of Giant Children and Their Significance in Obstetrics. (*Die Häufigkeit und geburtsbildliche Bedeutung der Riesenkinder*) *W. d. d. f. Geb. u. G.* 94 437

By Zentralbl. f. d. ges. Gyn. u. Geburtsh. d. Grenzgeb.

Some authors have designated as giant children all those weighing over 4,000 gms. although their birth does not generally show the characteristics peculiar to the delivery of giant children. The author proposes to designate children weighing over 4,400 gms. as abnormally large and those

weighing more than 5,000 gms. as giant children. His case was that of a 36-year old VIII para who two years before had been delivered of a macerated child weighing 6,750 gms. When the author was called for the delivery under consideration the head was already born and he extracted a child weighing 6,500 gms. 65 cm long head circumference 37 cm shoulder circumference 47 cm. Giant children are borne most frequently by mothers of advanced age strong constitution and good state of nutrition. Frequently the pelvis are larger than normal. There is a marked preponderance of boys.

Among 15,000 deliveries there were 90 abnormally large children, 75 per cent of them boys. 15 per cent were born dead. Among the 15,000 there were 6 giant children. All were artificially delivered. All the mothers were over 30 and multiparae. The mortality is not given. ROTHE

Rongy A. J. and Arluck S. S. Pituitrin. V. 1. V. J. 914. 1913. 878. By Surg. Gynec. & Obst.

After a careful study of pituitrin in 300 cases, the authors draw the following conclusions:

1. Pituitrin does not induce labor pains.  
2. It should not be used in the early part of the first stage of labor for its action is too transient.

3. It should not be used in complete inertia because of danger of rupture of the uterus.

4. It is contra-indicated in cases of dystocia due to malposition or contracted pelvis.

5. It should never be used in cases in which a sudden rise of blood pressure might produce danger.

6. A single dose of pituitrin may be used as an adjuvant in cases where pregnancy is interrupted either by a catheter or bag and only when contractions of the uterus have already set in.

7. It should be used only in cases in which the cervix is dilated or dilatable and the presenting part is engaged in the pelvic outlet.

8. It should be used cautiously in cases in which the fetal heart sounds are feeble or irregular.

9. It should never be used unless a general anesthetic is within easy reach for the contractions may become so violent that rupture of the uterus becomes imminent.

The authors recommend the use of morphine hypodermically in cases of inertia. It is seldom found to be a source of danger to the child even when large doses are given. Morphine in addition to inducing rest and sleep relaxes the circular muscle of the cervix and thus helps dilatation. C. H. D. 15

Anderson L. F. Clinical Experience with Pituitrin in Obstetrics. B. J. 914. 1913. 64. By Surg. Gynec. & Obst.

The author quotes extracts from earlier reports favorable to the wide use of pituitrin in obstetrics. He has used it in some sixty-five cases with no un-

favorable results. He gives a brief history of ten young primiparae in whom the duration of labor was shortened. He concludes that pituitrin is an especially valuable preparation in the practice of obstetrics on account of its producing contractions resembling the natural uterine contractions. It is also a satisfactory heart tonic and blood pressure raising principle and has considerable effect on the bladder and kidneys, rendering catheterization after childbirth unnecessary in most cases. It should be handled cautiously in cases of myocarditis and marked nephritis, especially in the presence of high blood pressure. C. H. DAVIS

Wber F.: The Tampon in Obstetrics and Gynecology. A Clinical and Bacteriological Study (Die Tamponade: Geburtshilf und Gynäkologie Eine klinische und experimentell bakteriologische Studie). München med. W. 914, 1913, 3. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Genaug.

Tamponing the uterus in atonic post partum hemorrhage is generally indicated only after other methods have failed. In 15.9 per cent of the cases in the Munich clinic it was followed by a puerperium with high fever. In private house where the asepsis is not so strict it should be avoided as far as possible. The same thing is true in even greater degree in hemorrhage from placenta previa. Here the tampon should only be used temporarily in transporting the patient to the hospital. The mortality of the cases tamponed outside the hospital was 28.5 per cent.

The tampon is indicated in treating abortion that has already begun, less so in the induction of artificial abortion or premature labor. In gynecology the author recommends the tampon after extensive intra-abdominal operations, and in adherent tumors where accurate hemostasis cannot be accomplished. He carries the tampon through Douglas pouch and out at the vagina. True drainage does not take place since the secretion from the wound becomes stagnant in the upper part of the tampon while the lower parts remain dry. Therefore the tampon is replaced after 20 to 24 hours by rubber tube.

In a large number of gynecological and obstetrical cases the author has examined the cavity of the uterus, bacteriologically before the placement of the tampon and has also examined the tampon after 7 to 10 hours. He found that the different kinds of gauze such as iodoform, xeroform, and dermatol of gauze were the same in their bactericidal effect. If the cavity of the uterus was sterile they remained sterile for 24 hours after that many bacteria were found.

The development of the bacteria could be restrained in as much as 24 hours only by the use of Merck's perhydrol or Dermol gauze moistened with iron chloride. In contrast with the iodoform gauze the tampons of sterile gauze showed no enormous bacterial content after 24 hours.

REITER-SHALLS

**Schweitzer B** Lactic Acid Irrigations in Pregnancy (Über die Berechnung der Milchsäureequivalenzen der Schärferung) *Zentralbl f Gynäk* 94 xxxvi 334

By Zentralbl f d ges Gynäk u. Geburtsh d Grenzgeb

The material used by Traugott as the basis of his study of the value of lactic acid irrigations is so different from Schweitzer's material that the difference in their results is very easily explained. Schweitzer points out that the longer the irrigations are begun before delivery in cases with a pathological secretion the better the prognosis for the puerperium and that even cases that have been insufficiently irrigated that is less than ten times show better results than those that have not been irrigated at all. Lactic acid irrigations are designed to supplement the autocleansing of the vagina or to replace the latter if it is lacking. **H. HOFFMANN**

**Richter J and Hlasek V** The Most Favorable Age for the Birth of the First Child (Über das für die erste Geburt günstigste Alter) *Wochenschr f Geb f u Gynäk* 913 xxxv 625

By Zentralbl f d ges Gynäk Geburtsh d Grenzgeb

In order to determine the most favorable age for delivery the authors studied the enormous material of the Vienna gynecological clinic including 2609 primiparae. They divided the primiparae into 9 groups the first group including those from 3 to 6 years the ninth those over thirty. They found that the duration of labor from the seventeenth to the twenty-fifth year was practically the same before the seventeenth year it seemed to be little longer and after the twenty-fifth it gradually increased and reached its maximum in primiparae over 30 years old.

Judging from the frequency of operations the physiological limits for the first delivery are 17 and 5 the nineteenth and twentieth years showing the lowest percentage of operations. The young primiparae also show a lower maternal morbidity and mortality the most favorable age being from 21 to 26 the least favorable after 30. There is also the highest percentage of eclampsia in primiparae over thirty 17 per cent above that age having eclampsia. Placenta praevia also increases in primiparae over 30 in spite of the fact that it is relatively infrequent in primiparae. The authors attribute this to hypertrophic catarrhal inflammations of the endometrium which would also explain the later conceptus. **VOIGT**

**Huguier and Lorrain** Hypertrophy of the Breast in Pregnancy (Hypertrophie mammaire gravidique) *Bull et mém Soc de méd P r* 94 xv 4

By Journal de Chirurgie

A woman of whose breasts were compared clinically became pregnant. By the end of the fourth month the breast had become enormous and were very hard with some soft spots. The patient became cachectic and abortion was induced. The

menses reappeared six weeks after the operation but the breasts remained very large and secreted milk for six months. At each menstrual period they increased in size for a few days. Five years later the patient noticed a lump the size of a nut in the right breast. This increased rapidly in size and the skin over it became purplish.

The breasts hung down as far as the iliac crests. They were soft but each contained 4 or 5 hard nodules the size of a small mandarin. The nodule first noticed was as large as an orange round smooth and movable over the deep parts. The skin over it was slightly adherent. There were no glands in the axilla and no pain except a little engorgement and formation in the right arm. The general condition was moderately good the skin yellowish. The breasts were removed at two operations. The result was excellent the general condition is now good and the yellowish color has disappeared. The right breast weighed 157 gms the left 506 gms. Histologically they showed the lesions of diffuse fibroadenoma but not a trace of cancer. The authors think that pregnancy undoubtedly has an influence on hypertrophy of the breasts. It is due to an excessive action of certain internal secretions acting on an already abnormal gland. **G. MUSOV**

**Beard J H** The Importance of Urinalysis during Pregnancy and the Significance of the Positive Findings *Ill no M J* 94 xxv 96

By Surg Gynec & Obst

The author briefly discusses the importance of urinalysis during pregnancy. He takes up albuminuria melituria urea and ammonia in some detail. He is of the opinion that the importance of the microscopic examination cannot be overestimated. It is as a whole more dependable and more readily interpreted than the positive chemical test. The following conclusions are reached:

1. In pregnancy so-called physiologic albuminuria should be regarded as indicative of renal abnormality and the patient watched accordingly.

2. Recognition and differentiation of the different types of albuminuria are imperative in order that the members of the toxic group may be discovered by their gravity appreciated and proper treatment instituted.

3. The infectious and mechanical types should be carefully observed to detect developing nephritis and to avoid any increased irritation of the renal epithelium.

4. Melituria during pregnancy in the absence of clinical symptoms should by no means be interpreted as a sign of diabetes until lactosuria alimentary and transient glycosuria have been excluded.

5. Very low urea output is a danger signal and the patient should be kept under close supervision.

6. High ammonia may be due to increased total nitrogen eliminated following nitrogen retention on nutrition catharsis, or it may also result from bacterial contamination of the bladder and be unaccompanied by any unfavorable symptoms.

No great emphasis should be placed on percentage values in determining a radical course of clinical procedure but we should be guided by the symptoms, as well as the urinary findings.

Analysis of the urine is a means of great value in separating the safe from the hazardous cases, and while it may not indicate when to empty the uterus it should lead to the adoption of such due hygiene and medical aid as to make intervention unnecessary in many cases and many children would be born that otherwise would have been doomed.

LOWARD L. CORNELL.

Tasakis, A. Oxytocics (Über W henrutt) (r 4  
f Gyn 4 9 4 ci 513  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Quinone has the best results in the first stage. Pituitrin glandularin and colutrin are the best in the second stage. Pituitrin causes continuous contractions in 2 cases which resulted in one case in the death of the child. In post partum hemorrhage 2 cases pituitrin and 2 cases veracornin had an excellent effect. Among 104 cases in which pituitrin was given there were no cases of cervical contraction. Secarum was the best in post partum hemorrhage — not a failure being reported in 135 cases. Veracornin was used intraputrum in 24 cases on von Herff's recommendation. In 9 cases there were continuous contractions which resulted in the death of the child in 5 cases and deep asphyxia twice. The lower uterine segment (uterine) has a good effect in the post partum stage.

Gardlund W. Extract of Hypophysis as an Oxytocic (Hypophysenextrakt als W henrutt) (r 4  
f Gyn 4 10 4 343  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Five cases are reported. Larger doses than 1 gr of the infundibular gland has an advantage over smaller doses. Extract of hypophysis is a good but not altogether reliable oxytocic. No results can be expected if labor is not already begun. It is not more effective in the second stage than in the first. Its strengthening the contractions the first one generally being complete and lasting as long as 45 minutes. It is very painful and may be dangerous for the child. This is especially true in intra-uterine administration. The effect takes place within an hour or further effect can be expected after that time. In spite of possible strengthening of the contractions sometimes there was no delivery of labor as was shown by repeated internal examinations.

Especially good is its effect in hastening delivery when atony is not present. The cause of the failure was not explained. The more frequent post partum hemorrhages are not directly caused by the extract of hypophysis.

WAGNER

Klaus H. Use of Narkophin in Obstetrics (Über Verwendung v. Narkophin in der Geburtshilfe) (r 4  
f Gyn 4 10 4 343  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author reports 90 cases. According to previous experiments narkophin is a useful agent for decreasing pain in labor. It has the advantage of pantopon of being less harmful. When used in moderation asphyxia rarely occurs. Of the 16 cases of a pharynx observed only 3 could be attributed to this agent. All the children left the clinic in good condition. When properly used, narkophin has only a slight effect in decreasing the force of the contractions, much less than pantopon. It is used during delivery in the form of injections 1 cm representing 0.03 gr narkophin or during the puerperium in the form of tablets, 0.015 gr narkophin in each to prevent after pains.

BEHNEN

Schlappobersky J. P. Delivery without vaginal examination (Zur Frage des Letzt. v. von Geburten ohne vaginal L. Versuch n.) (r 4  
f Gyn 4 10 4 343  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

There is always danger of infection in vaginal examination and in 90 per cent of the cases it only serves to follow the normal course of delivery therefore the author calls attention to the rectal examination previously discussed by Olshausen. Krüger and Buchs by which information can be obtained as to the position of the head, the pelvis, the fontanelles, and the skull sutures. Tense membranes and thick edges of the os can also be demonstrated in this way. Frequently the question of how far the os dilated cannot be determined but the obsterger should also by external examination the condition of the contraction ring can be determined and from this the degree of dilatation of the os judged. If in spite of combined rectal and external examination any question of real importance remains unsolved one vaginal examination is generally sufficient to clear it up and the further course of the labor can be followed per rectum.

The author has delivered 8 cases in his private practice and 9 in the clinic without vaginal examination and only once had a rise in temperature to 36 on account of retention of remnant of membranes.

BOHRER RO.





# GENITO-URINARY SURGERY

## KIDNEY AND URETER

**Bevacqua A.** Histological Contribution to the Study of Congenital Unilateral Atrophy of the Kidney (Contribution histologique à l'étude de l'atrophie congénitale unilatérale du rein) *Fal. d. 194, n. 464* By Journal de Chir.

The author describes a very rare case of congenital atrophy of one kidney in a young man of 22 who died of tubercular peritonitis without any history of urinary disease. The right kidney was reduced to the size of a chestnut. It was made up of two parts: one fleshy almost triangular which seemed to represent the parenchyma and a cystic part with irregular caecities containing a liquid made up of albumin, urea, phosphates, etc. There were no traces of the pelvis nor of the calices nor of the renal part of the ureter. The lower two-thirds of the ureter was well developed; the upper third was transformed into a fibrous cord divided into four or five connective tissue filaments which had no connection with the atrophied kidney.

Histological examination showed that the fleshy portion was formed of tubules of varying sizes ending in cul-de-sacs lined with a single layer of cubical epithelium cylindrical or flat. They did not resemble in any way the structure of the normal tubules. In a numerous series of sections Malpighian bodies were found in only one place and they were very much altered. The suprarenal capsules, the testicles, the seminal vesicles and the prostate were normal. The left kidney was greatly hypertrophied which malformation was probably due to a mechanical cause. Probably during intra-uterine life soon after the union of the secretory and excretory parts of the right urinary apparatus the kidney was separated from the ureter. This hypothesis seems to be confirmed by the presence of numerous muscular fibers and the few tubules which may be considered as debris of the calices and the pelvis. *L. JEA.*

**Miley C. E.** A Case of Unilateral Renal Aplasia *Lancet Cl. 94, n. 5* Surg. Gynec. & Obst.

In these cases is due to this condition and is not merely accidental as shown by the frequency of pathological conditions in the opposite kidney. The author calls attention furthermore to the fact that there are 10 cases on record in which nephrectomy was done in ignorance of the existence of this condition.

In the reported cases great variation in the condition of the monolateral ureter is reported.

*HERMAN L. KRETSCHEM*

**Harpster C. M.** An Interesting Case of Renal Hematuria with Three Anomalous Renal Arteries. *Oh. St. M. J. 194, n. 7* By Surg. Gynec. & Obst.

The case reported by Harpster is a very interesting one for three reasons: (1) Three years previously the author had removed the right testicle and cord from this patient for a sarcoma. The onset of the hematuria was insidious. (2) A possible traumatic origin of the hemorrhage might have been explained from the fact that the patient was injured by an automobile which struck his right side a few days previous. (3) At operation three anomalous arteries were found. As one of the possible causes of the hematuria the author mentions rupture of one of these branches of the renal artery into the pelvis of the kidney. It would have been interesting to have had histological reports of pieces excised from various parts of the kidney or better still to have had sections of the entire kidney to determine what pathological changes were present. Inasmuch as the author states a soft degenerated spot was found on the upper pole.

*HERMAN L. KRETSCHEM*

**Benjamin, A. E.** Cystic Kidney. *Inter. J. Surg. 94, n. 5* By Surg. Gynec. & Obst.

The author summarizes briefly the pathology and symptoms of cystic kidney with reports of nine personal cases on which he had operated. He points out that only by early recognition of the condition is there hope of benefiting the patient.

*H. L. S. 1000*

**Mackay W. M. A.** Surgical Operation in Polycystic Kidney (Des interventions chirurgicales dans le rein polykystique). *Thes. & doc. P. 94* By Journal de Chir.

The author gives a very complete history of surgical operations for polycystic kidney and reviews at length the question of indications for operation. Like the majority of authors he believes in the necessity of operation in cases of complications such as suppuration, persistent hematuria.

7 No great emphasis should be placed on percentage values in determining a radical course of clinical procedure but we should be guided by the symptoms as well as the urinary findings.

8 Analysis of the urine is a means of great value in separating the safe from the hazardous cases and while it may not indicate when to empty the uterus it should lead to the adoption of such diet hygiene and medication as to make intervention unnecessary in many cases and many children would be born that otherwise would have been doomed.

L. W. I. CORVELL.

Tasakus, A.: Oxytocics (Über W. h. mittl.) 1. 4. 1914. 1. 313.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Frauenheilk.

Quinine has the best results in the first stage. Pituitrin putugland and gluhutrin and coltrin are the best in the second stage. Pituitrin causes continuous contraction in 2 cases, which resulted in one case in the death of the child. In postpartum hemorrhage 2 ccm putugland and 2 ccm cacacornin had an excellent effect. Among 104 cases in which putugland was given there were 2 cases of continuous contraction. Cacacornin works best in postpartum hemorrhage—not a failure being reported in 185 cases. Cacacornin was used intraperitoneally in 24 cases on von Herff's recommendation. In 9 cases there were continuous contractions which resulted in the death of the child in five cases and deep asphyxia twice. The doses were 1/2 to 2 ccm. Litramin (para-oxyl benzylamine) has a good effect in the first parturition stage. D. M. K.

Gardlund, W.: Extract of Hypophysis as an Oxytocic (Hypophysenextrakt (W. h. mittl.) 1914. 1. 4. 1914. 1. 313.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Frauenheilk.

In 15 cases are reported. Larger doses than 0.1 gr of the subcutaneous gland have no advantage over smaller doses. Extract of hypophysis is a good but not altogether reliable oxytocic. No result can be expected if labor has not already begun. It is not more effective in the second stage than in the first. It strengthens the contractions. The first one generally being complete and lasting as long as 45 minutes. It is very painful and may be dangerous for the child. This is especially true in intravenous administration. The effect takes place within an hour. No further effect can be expected after that time. In spite of perfect strength given in 15 contractions some of these there was no advance in labor as was shown by repeated internal examination.

Especially good is its effect in hastening delivery when atony is not present. The cause of the failure was not explained. The more frequent postpartum hemorrhages are not directly caused by the extract of hypophysis. W. A. K.

Klaus, H.: Use of Narkophin in Obstetrics (Über Narkophin in der Geburtshilfe. 1914. 1. 4. 1914. 1. 313.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Frauenheilk.

The author reports on cases. According to previous examination narkophin is a useful agent for decreasing pain in labor. It has the advantage over pain of being less harmful. When used in moderate doses asphyxia rarely occurs. Of the 16 cases of asphyxia observed only 3 could be attributed to this agent. All the children left the clinic in good condition. When properly used narkophin has only a slight effect in decreasing the force of the contractions much less than pituitrin. It is used during delivery in the first 10 sections 2 ccm representing 0.03 gr narkophin or during the puerperium in the form of tablets 0.01 gr narkophin in each to prevent afterpains. B. M. K.

Schlapobersky, J. P.: Delivery without vaginal examination (Zur Frage der vaginalen Untersuchung. 1914. 1. 4. 1914. 1. 313.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Frauenheilk.

There is always danger of infection in vaginal examination and in comparison of the cases it is only wiser to follow the normal course of delivery. Therefore the author calls attention to the fact that in a previously discussed by Olshausen. Krummholz, by which information can be obtained as to the position of the head the pelvis is the fetal neck and the skull sutures. These membranes and thick edges of the os can also be demonstrated in this way. Frequently the question of how far the os is dilated cannot be determined but Unterberger shows how by external examination the condition of the contraction ring can be determined and from this the degree of dilatation of the os judged. If in spite of continued internal and external examination the question of delivery remains unanswered one vaginal examination is generally sufficient to clear it up and the further course of the labor can be followed per rectum.

The author has delivered 8 cases. His previous practice and 1913 the history of vaginal examination and 1914 once had a case of imperforate anus on account of the condition of the fetus. B. M. K.



# GENITO-URINARY SURGERY

## KIDNEY AND URETER

**Beracqua, A.** Histological Contribution to the Study of Congenital Unilateral Atrophy of the Kidney (Contribution histologique à l'étude d'atrophie congénitale unilatérale d'un rein)  
*Pol. med.* 914 1 464 By Journal de Chirurgie

The author describes a very rare case of congenital atrophy of one kidney in a young man of 22 who died of tubercular peritonitis without any history of urinary disease. The right kidney was reduced to the size of a chestnut. It was made up of two parts, one fleshy almost triangular which seemed to represent the parenchyma and a cystic part with irregular cavities containing a liquid made up of albumin, urea, phosphates, etc. There were no traces of the pelvis nor of the calices nor of the renal part of the ureter. The lower two thirds of the ureter was well developed, the upper third was transformed into a fibrous cord divided into four or five connective tissue filaments which had no connection with the atrophied kidney.

Histological examination showed that the fleshy part was formed of tubules of varying sizes ending in cul-de-sacs lined with a single layer of cubical epithelium cylindrical or flat. They did not resemble in any way the structure of the normal tubules. In a numerous series of sections of the pyramidal bodies were found in only one place and they were very much altered. The suprarenal capsules, the testicles, the seminal vesicle and the prostate were normal. The left kidney was greatly hypertrophied, which malformation was probably due to mechanical cause. Probably during intra-uterine life soon after the union of the secretory and excretory part of the right urinary apparatus the kidney was separated from the ureter. The hypothesis seems to be confirmed by the presence of numerous muscular fibers around the few tubules which may be considered as debris of the calices and the pelvis. E. JEAIRA

**Kelsey, C. E.** A Case of Unilateral Renal Aplasia  
*Lancet* 94 5 By Surg. Gynec. & Obst.

The author reports a case of this rare condition. He quotes statistics which vary as to the frequency of the cases found at autopsy. As a result of the compilation of these figures there were recorded 8 cases in 3643 autopsies making the incident about one in 455.

He was able to find 30 cases recorded without hypertrophy including 3 cases of secondary contraction.

Attention is called to the fact that the mortality

in these cases is due to this condition and is not merely accidental as shown by the frequency of pathological conditions in the opposite kidney. The author calls attention furthermore to the fact that there are two cases on record in which nephrectomy was done in ignorance of the existence of this condition.

In the reported cases great variation in the condition of the monolateral ureter is reported.

HERMAN L. KRETSCHMER.

**Harpster, C. M.** An Interesting Case of Renal Hematuria, with Three Anomalous Renal Arteries. *Okla. St. J.* 1914 2 271  
 By Surg. Gynec. & Obst.

The case reported by Harpster is a very interesting one for three reasons. (1) Three years previously the author had removed the right testicle and cord from this patient for a sarcoma. The onset of the hematuria was insidious. (2) A possible traumatic origin of the hemorrhage might have been explained from the fact that the patient was injured by an automobile which struck his right side a few days previous. (3) At operation three anomalous arteries were found. As one of the possible causes of the hematuria the author mentions rupture of one of these branches of the renal artery into the pelvis of the kidney. It would have been interesting to have had histological reports of pieces excised from various parts of the kidney or better still to have had sections of the entire kidney to determine what pathological changes were present inasmuch as the author states a soft degenerated spot was found on the upper pole.

HERMAN L. KRETSCHMER.

**Benjamin, A. E.** Cystic Kidney. *Int. J. Surg.* 94 115  
 By Surg. Gynec. & Obst.

The author summarizes briefly the pathology and symptoms of cystic kidney with reports of nine personal cases, on which he had operated. He points out that only by early recognition of the condition can there be hope of benefiting the patient.

H. L. SANFORD.

**Mickanowski, A.** Surgical Operation in Polycystic Kidney. (Diverses opérations chirurgicales dans le rein polykystique). *Thèses de doc. P.* 94  
 By Journal de Chirurgie

The author gives a very complete history of surgical operations for polycystic kidney and reviews at length the question of indications for operation. The majority of authors he believes in the necessity of operation in cases of complications such as suppuration, persistent hematuria

hydronephrosis displacement of the kidney anuria, intestinal occlusion and even intolerable crises of pain.

Before any operation the soundness of the opposite kidney must be determined by catheterization of the ureters and examination of the urine from each. If the kidney is functioning normally nephrectomy by the lumbar route may be performed but this operation should be reserved for cases where suppuration or abundant haematuria makes any other impossible for it removes a kidney part of which was normal and leaves all the work to the other which is always slightly diseased. If the opposite kidney is found insufficient conservative operations should be performed in the case of suppuration nephrotomy in anuria nephrotomy is the only operation possible but its value is questionable.

If there is a large displaced polycystic kidney which is movable and painful nephropexy with decapsulation and excision of the cysts is indicated. In all other cases he rejects the method of puncture and incision of the cysts with marsupialization and advises partial nephrectomy or better yet decapsulation with excision of all the cysts. The latter operation was performed by Taendler in 1894 but has been little used. Only three cases have been published to which the author adds two unpublished cases. The results were good in all these cases and he advises the operation.

L. CAPEITE.

Oertel II. A Contribution to the Knowledge of Experimental Nephritis. *Lancet* Lond 1914  
xxx: 450. By Surg. Gynec. & Obst.

The author describes the action of certain poisons on the kidney and the results of his experiments on the lower animals.

Lyon in 904 showed from his own experiments and the investigations of others that cantharidin poisoning there occurs not only vascular injury and reaction but a diffuse necrosis of the secretory tubular cells and that in poisoning by bichloride of mercury glomerular lesions may also be present.

Pearce and Eusembrey demonstrated that nephrotoxic and hæmolytic immune sera cause changes which by physiological methods present no evidences of vascular injury but which are anatomically characterized by exudative glomerular lesions of moderate severity. In arsenic poisoning on the other hand physiological methods show profound vascular changes but the anatomical investigation shows little or no vascular lesion.

Aschoff and Suzuki find that uranium and mercury produce necrosis of cells associated with a dropsical hyaline degeneration cantharidin on the other hand produces necrosis with marked swelling and acutization of the cells. They come to the conclusion that all poisons act primarily on the parenchyma.

Opie's investigation demonstrated that cantharidin exerts decided influence on the lymph flow

of the liver which is associated with definite structural changes.

The author has recently carried on an investigation into the structural changes which cantharidin bichloride of mercury and uranium nitrate produce in the liver of rabbits where doses usually employed and sufficient for the production of nephritis had no effect on the liver.

Fifteen animals were employed of these 7 were poisoned with varying doses of cantharidin of a strength usually employed in the study of experimental nephritis 4 were in similar fashion poisoned with bichloride of mercury and 4 with uranium nitrate. A summary of results follows.

Cantharidin produces a rapidly progressing and general parenchymatous degeneration and necrosis associated almost from the beginning with tremendous hæmorrhagic vascular engorgement and cellular exudation these lead even in small and moderate doses to a marked and rapid disorganization of the liver. The accompanying constitutional symptoms are severe and speedily lead to death.

In mercury the picture is controlled by parenchymatous and fatty degeneration with which edematous swelling is associated. These lead according to dose and susceptibility of the animal to rapid or retarded solution of the cell especially in the central parts of the lobules. Somewhat similar to mercury are the changes brought about by uranium but a much greater inflammatory oedema or serous exudate and a greater swelling vacuolization and cytotoxicity of the parenchyma in kidney and liver distinguish it from mercury poisoning.

The conclusion may therefore be drawn that cantharidin mercury and uranium are not selective poisons, that they affect not only the kidney but the liver and that they involve in both organs the parenchyma as well as the circulatory system.

In conclusion the author calls attention to pathological changes in the liver of untreated rabbits.

Care must be exercised not to confound on the one hand the results of idiopathic infections with the results of experimental procedures and on the other hand the evidence of regeneration occasionally encountered in untreated rabbits, with normal conditions or related to no malfunctions.

TR. DROZDOWITZ

Wegelin and W. Idols. Anatomical Study of the Early Stages of Chronic Tuberculosis of the Kidneys. (*Anatomische Untersuchungen über Frühstadien der chronischen Nierenerkrankung*)  
*Ztschr. f. med. Chir.* 94.

By Zentralblatt f. d. ges. Chir. Griesnager

The authors made a very detailed histological and anatomical study of 15 cases. They say that kidney tuberculosis is demonstrable in the earliest stages when functional diagnosis shows only slight alterations in function and when toxic clinical cases can seriously disagree on has affected only a small part of the pyramids and has not perceptibly affected the cortical substance.

From their research they reach the following conclusions

Macroscopically the tuberculosis is mostly localized in the papillae this finding is characteristic of the disease. The simultaneous involvement of several papillae is probable. Tuberculosis of the cortex was found in some cases but large caseous foci were not found. In 6 cases clearly defined tubercles were found in the kidney pelvis. Microscopically the authors found that chronic tuberculosis of the kidney is localized primarily in the pyramids if foci were found in the cortex they were secondary. The lateral surfaces of the pyramids are first involved also the niches of the calices subepithelial tubercles develop. By secondary cystic dilatation of the collecting tubules tubercular foci arise in the pyramids themselves. These tubercles in the pyramids run perpendicular to the surface of the kidney like rows of pearls along the small arteries. The cortex first becomes diseased over the diseased pyramids or in a circumscribed wedge shape and becomes atrophic, like an infarct scar.

There are three ways in which it is possible for the bacilli to reach the pyramids and calices (1) The direct hematogenous which the authors do not think is very important (2) the indirect hematogenous in which the bacilli reach the kidney in the blood stream are then excreted with the urine and mechanically remain lying in the niches of the calices which are not flushed out much by the urine. The authors believe this is the most important way for direct infection of the pelvis from the urinary passages the same anatomical picture occurs (3) the assumption of infection by the lymphatic route is scarcely justified. The urinary blood and lymph passages all take part in spreading tuberculosis of the kidney. Extension by way of the urinary tubules is possible in stasis of the urine. Extension by the blood vessels is of slight importance. The fact that the tubercles appear like strings of pearls parallel to the small kidney arteries without the walls of the arteries being involved indicates that extension takes place through the lymph channels accompanying the arteries. In the neighborhood of the tubercles there are changes in the parenchyma. There is infiltration with plasma-cells and lymphocytes which is due to toxic effects of the bacilli and atrophy of the parenchyma especially in the wedge shaped foci in the cortex.

From the anatomical picture conclusions can be drawn as to the virulence of the infection. Generally there is a tendency to caseation but in the periphery there are fresh tubercles. Individual cases show slight tendency to caseation which indicates slow progress of the parenchymatous destruction. In other cases the tendency to caseation is very great here the process is an extremely acute one. Reparative processes—fibrous transformation of the tubercle—were observed in only one case where there had been no clinical symptoms of kidney

tuberculosis and it was found by chance in an autopsy after typhoid. But even this case showed a large caseous focus at the apex of the papilla. The authors admit that there may be a primary localization of the chronic tuberculosis in the cortex, which may result in recovery with the picture of a tubercular contracted kidney analogous to tubercular cirrhosis of the liver with destruction of the parenchyma. JAMSEY

Suter, F. Treatment of the Ureter and Healing of the Wound in Nephrectomy for Kidney Tuberculosis (Zur Frage der Ureteranastomose und Wundheilung bei der Nephrektomie wegen Nierentuberkulose). *Ztschr. f. urol. Ch.* 9 4 u 164. By Zentralblatt des Chir. u. Grenzgeb.

One of the unpleasant complications in the operative treatment of kidney tuberculosis is the frequency with which fistulae of the ureter follow the operation. The question of how the tubercular ureter is to be attended to has so far not been definitely answered.

The author describes his experience in 66 cases of operation for kidney tuberculosis which shows that at least a part of the complications can be avoided. His results in the healing of the wounds have markedly improved with time. At first only a third of the cases healed by first intention now five sixths of them do.

The improvement in results is explained partly by the most rigorous asepsis and the greater safety and quickness of the operation—he has done away with an oluntary opening of the diseased kidney or ureter—and partly by a very careful and exact method of dealing with the ureter as follows.

The ureter is isolated downward as far as desired. Then it is crushed with a strong broad forceps and a silk ligature is passed about the upper and lower edges of the crushed area. It is then burned through with the thermocautery. He does not believe in the purchase of caverns. In large kidneys that are located high up under the costal arches he unhesitatingly resects the twelfth rib and has never seen any bad results from it. In this way he secures enough space to safely remove even very large kidneys. From his experience the kind of disease of the ureter has no effect on the healing of the wound. Success is attained by good technique in separating the ureter and the most careful asepsis during the operation. OENLIZ.

Robertson W. C.: Kidney Disease with Special Reference to the Test for Functional Capacity. *V. J. M. J.* 9 4, 1914 97.

By Surg. Gynec. & Obst.

The author attests the extreme value of the phenolphthalein test in diagnosis and prognosis of diseases of the kidney. The case with which the extent and presence of renal disease—even up to and including the actual development of uræmia—when the usual laboratory and clinical methods of examination are made use of—is shown.

hydronephrosis, displacement of the kidney anuria, intestinal occlusion, and even intolerable crises of pain.

Before any operation the soundness of the opposite kidney must be determined by catheterization of the ureters and examination of the urine from each. If the kidney is functioning normally nephrectomy by the lumbar route may be performed but this operation should be reserved for cases where suppuration or abundant hematuria makes any other impossible for it removes a kidney part of which was normal and leaves all the work to the other which is always slightly diseased. If the opposite kidney is found in sufficient conservative operations should be performed in the case of suppuration nephrotomy in anuria nephrotomy is the only operation possible but its value is questionable.

If there is a large displaced polycystic kidney which is movable and painful nephropexy with decapsulation and excision of the cysts is indicated. In all other cases he advocates the method of junction and incision of the cysts with marsupialization and adhesion partial nephrectomy or better yet decapsulation with excision of all the cysts. The latter operation was performed by Tanner in 1894 but has been little used. Only three cases have been published to which the author adds two unpublished cases. The results were good in all these cases and he advises the operation.

L. C. PATTE.

Oertel H. A Contribution to the Knowledge of the Experimentally Induced Nephritis. *Lancet*, London, 1904, 12, 43. By Surg. General & Colonel.

The author describes the action of certain poisons on the kidney and the results of his experiments on the lower animals.

Lyo 1904 has concluded from his own experiments and the investigations of others that in cantharidin poisoning there occurs not only vascular injury and reaction but a diffuse necrosis of the secretory tubular cells and that in poisoning by bichloride of mercury glomerular lesions may also be present.

Lee and Leachman demonstrated that in nephrotic and hemolytic immunoses a cause changes which by physiological methods present no evidences of ascua injury but which are anatomically characterized by exudative glomerular lesions of moderate severity. In arsenic poisoning, on the other hand, physiological methods show profound vascular change but the anatomical investigation shows little or no vascular lesion.

Arch and Suzuki find that uranium and mercury produce necrosis of cells associated with a dropical hyaline degeneration. Cantharidin on the other hand produces necrosis with marked swelling and coagulation of the cells. They come to the conclusion that all poisons act primarily on the parenchyma.

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Fifteen animals were employed of these 7 were poisoned with varying doses of cantharidin of a strength usually employed in the study of experimental nephritis 4 were in similar fashion poisoned with bichloride of mercury and 4 with uranium nitrate. A summary of results follows.

Cantharidin produces a rapidly progressing and general parenchymatous degeneration and necrosis associated almost from the beginning with tremendous hemorrhagic vascular engorgement and cellular exudation these lead even in small and moderate doses, to a marked and rapid disorganization of the liver. The accompanying constitutional symptoms are severe and speedily lead to death.

In mercury the picture is controlled by parenchymatous and fatty degeneration with which edematous swelling is associated. These lead according to dose and susceptibility of the animal to rapid or retarded solution of the cells especially in the central parts of the lobules. Somewhat similar to mercury are the changes brought about by uranium, but a much greater inflammatory exudate or serous exudate and a greater swelling vacuolization and cytolytic of the parenchyma in kidney and liver distinguish it from mercury poisoning.

The conclusion may therefore be drawn that cantharidin mercury and uranium are not selective poisons that they affect not only the kidney but the liver and that they involve in both organs the parenchyma as well as the circulatory system.

In conclusion the author calls attention to pathological changes in the liver of untreated rabbits.

Care must be exercised not to confound on the one hand the results of idiopathic sections with the results of experimental procedures and on the other hand the evidences of liver regeneration occur naturally encountered in untreated rabbits with normal condition related to renal or functional changes.

THOS. DIXON, M.D.

Weglin and Widholz: Anatomical Study of the Early Stages of Chronic Tuberculosis of the Kidney. (*Anatomische Untersuchungen an Frühstadien der chronischen Nierentuberkulose*) *Festschr. f. Anat. Chir.* 9, 4, 20.

By Centr. lab. f. d. ges. Chir. Grenzgeb.

The authors made a very detailed clinical and anatomical study of 25 cases. They say that kidney tuberculosis is demonstrable in the early stages when functional diagnosis shows only slight alterations in function and when anatomically caseous cavernous disintegration has affected only a small part of the pyramids and has not penetrated to the cortical substance.

**Furness, H. D.** Supernumerary Ureter Opening Extra calcally *Surg Gynec & Obst* 9 4, xviii, 584  
By *Surg Gynec & Obst*

The condition in the case was suspected from the characteristic history dribbling since birth and voiding normally. The aberrant ureter was discovered with difficulty and only after an injection of indigo carmin. At the operation it was found that the distal end of the ureter formed a fusiform sac an inch and a half long back of the ureter was thickened and easily dissected out for another inch and a quarter. It was implanted into the bladder just to the inner side and back of the normal ureter of that side. The necessary room for the performance of this operation was obtained by a pararectal incision through the vagina. The result was satisfactory.

Supernumerary ureters are quite frequent but those opening extravasically are only nineteen others having been reported.

An analysis of the symptoms, physical findings, operative procedures with results and references to the literature are given. From the study of his and other cases, Furness believes implantation through the vagina to be the operation of choice.

#### BLADDER, URETHRA, AND PENIS

**Swan, R. H. J.** Tumors of the Urinary Bladder *Lancet* Lond 9 4, cxxx 1, 309  
By *Surg Gynec & Obst*

Swan covers the subject from his own experience together with fifty eight cases that were then under his observation.

He considers the etiology as practically unknown. In that relation however inflammation, bilharzial ova and workers in aniline dyes are mentioned. Outside of villous papilloma (benign) and carcinoma other tumors of the bladder are considered rare.

Especial stress is laid upon the possibility of a non-malignant villous papillomata showing malignancy long after operation. He reports five cases—3 4, 1 1/2 and 1 years—in which sections showed non-malignancy when the tumor was removed, yet became malignant afterward. He looks with suspicion on any bladder papilloma covered with stunted villi or which have not those very delicate pedicles.

Carcinoma is claimed to be three times as prevalent as papilloma; the supposition is made that heretofore they have been looked upon as villous (benign) papillomata instead of villous carcinoma.

The symptom hamaturia is considered a differential point of distinction in favor of a papilloma when it entirely ceases at intervals. Cystitis is frequently the associate of carcinoma yet foreign to papillomata.

A case is reported whereby a ureter block occurred from a papilloma engaging the ureteral mouth from the cratic side. The kidney obstruction which followed was relieved upon the removal of the villous papillomata.

An unusual case is reported of villous carcinoma metastasis in a young man following eighteen months after an attempted removal of the cancer. The trunk of the body from the umbilicus to the knees including the bony wall as well with the exception of the abdominal viscera was invaded.

In twenty three epitheliomatous cases reported seven were operated upon—two being complete resections. Recurrence occurred outside of the bladder in one in eighteen months in another in twenty months.

Swan's use of 50 mgs of radium within the bladder for twelve to twenty four hours has not resulted favorably yet he considers it applicable to non-operative cases. **CHARLES E. BARNETT**

**Werelius, A.** Traumatic Detachment of the Bladder from Symphysis Pubis with Complete Severance of Urethra. Use of Labia Minora as a Substitute for Necrosed Anterior Vaginal Wall. *J Am M A* 9 4, lxxii, 1722  
By *Surg Gynec & Obst*

The author reports a case of pressure necrosis of the anterior vaginal wall, due to prolonged and difficult instrumental labor in which the urethra had completely disappeared and the bladder was entirely detached from the symphysis and was suspended only by the ureters and the peritoneum covering its posterior surface. The case was seen five months after labor and gave a history of complete incontinence of urine since delivery with profuse vaginal discharge. When seen the patient was in a general run-down condition and had lost considerable weight. Vaginal examination revealed an almost complete absence of the anterior vaginal wall and the bladder could be protruded far out of the vagina. There was no sign of any urethra. Two unsuccessful attempts were made to close the opening by bringing the edges of the remains of the vaginal wall together after freshening and under cutting them. The defect was finally closed by freshening and incising the edges of the labia minora along the outer and upper borders and dislocating them inward over the vaginal defect and suturing with chromicized catgut. **C. R. O'CONNOR**

**Martin, C.** The Correct Interpretation of Bladder Symptoms. *Med Fort* Phil 9 14, xl, 177  
By *Surg Gynec & Obst*

The author lays stress on the fact that bladder symptoms have an antecedent mechanical or nervous etiology. He says in the vast majority of cases it is a mechanical. He states that the three symptoms which force the patient to the physician are frequency, pain and hamaturia. He emphasizes the fact that the extravasical causes of these symptoms should be carefully studied and removed if possible.

Of the intravascular causes of bladder symptoms the author discusses, first stone in the bladder and lays stress on the frequent use of the cystoscope for the determination of the same. He also states that

Seven cases are reviewed illustrative of the information to be gained by the use of the phthalein test. The drug is injected intramuscularly and the first specimen collected an hour and 15 minutes later. A second and third collection are made at the end of each succeeding hour. "Normally the largest amount is eliminated at the end of the first hour and 15 minutes the amount varying from 30 to 50 per cent and 15 to 25 per cent at the end of the next hour with merely a trace in the third specimen. Abnormally this condition is reversed and the greatest amount is eliminated in the second or even the third hour and in the uræmia or impending uræmia elimination is often too slight to permit of definite reading in any of the specimens."

FRANK HINMAN

Stevens, W. E. The Comparative Value of Modern Functional Kidney Tests. *J Am Med Ass* 1914 Jan 1914 By Surg. Gynec. & Obst.

The author suggests that some of the older tests of renal function have been richlessly and unjustly abandoned in favor of the phthalein test of Rown tree and Geraghty and believes that no one test is sufficient. He made comparative studies of the ureal phloridzin and phthalein tests after ureteral catheterization. Two ccm. of a 0.5 per cent phloridzin solution were injected intramuscularly immediately following the insertion of the catheters and while the appearance of sugar was being awaited specimens were collected from each side for microscopic and urinal examinations. A fifteen minute collection was made after the appearance of reduction of Fehling's solution and a quantitative estimation of the sugar output estimated by means of two Lohmeyer saccharimeters. Six mg. of phthalein were then injected intravenously and after the appearance of the dye a fifteen minute collection and a quantitative colorimetric estimation were made. This gave three sets of figures for each kidney. The urea concentration, the quantitative fifteen minute output of sugar following phloridzin injection and the quantitative fifteen minute output of phthalein. The sugar appearance varied from 0.5 to 31 minutes and the output from 1 to 3.2 per cent—normal cases presumably being tested. The author finds that the tests apparently parallel each other and that the phthalein test as compared to the phloridzin is subject to fewer clinical errors and takes less time. F. HINMAN

Elsendath D. N. The Effect of Injecting Collargol into the Renal Pelvis. Preliminary Note. *J Am Med Ass* 1914 392 By Surg. Gynec. & Obst.

The author shows that the normal capacity of the dog's renal pelvis is 2½ ccm. Two ccm. of a 10 per cent solution of collargol injected under a pressure of 60 mm. of Hg produced death within ten minutes. Autopsy showed collargol in the lungs, liver, kidney, spleen, and stomach mucous membrane and free in the blood vessels.

In a second experiment 30 ccm. of collargol were injected under 100 mm. of Hg. pressure. The animal died within thirty minutes. In this animal most of the collargol escaped into the tissues around the renal pelvis but small amounts were found in practically all of the viscera.

V. D. LEEPMASSE

Stoeckel W.: Exclusion of the Kidney by Artificial Occlusion of the Ureter (Über die Ausschaltung der Niere durch künstlichen Ureterverschluss). *Z. f. urol. u. gynäk.* 1914 xxx iii 56 By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In answer to Bumm's paper read before the Berlin Gynecological Society on the cutting off by a ligature and lowering of the injured ureter, Stoeckel criticizes the methods in use where it is impossible to implant the ureter in the bladder or to suture. He rejects implantation of the ureter into the intestine, implantation of the injured into the uninjured ureter, the insertion of grafts, immediate nephrectomy and formation of a fistula from the ureter through the abdominal wall and in place of cutting off the ureter by ligation and lowering it, which does not leave the ureter watertight, he recommends as the best and simplest method the artificial linking of the ureter by tying a knot in it and ligating beneath the knot. If the other kidney becomes insufficient it is very easy to give local anæsthesia, make a small pararectal longitudinal incision and open the knotted and lowered ureter extrapentoneally. The excluded kidney is still unchanged after four days; after 21 days it loses the capacity to excrete indigo carmin and does not lose the capacity for excreting water for months.

NITSCHE

Fischer A.: Stone of the Ureter in a Child One and One-Half Years Old (Ureterstein bei einem 1½ jährigen Kinde). *Ztschr. f. urol. Ch.* 1914 ii 375 By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author's case is the third of the kind that has been operated on in childhood. Generally the stones pass from the ureter into the bladder because of the ease with which the child's ureter is dilated. The symptoms are not violent or especially characteristic. The passage of a stone may lead to the diagnosis, as in this case. Six months before operation there was cramp-like pain, voiding of the urine and a small stone was discharged after that the patient was troubled with sleeplessness and sometimes cramp-like pains. There were a few white and red blood-cells in the urine. The roentgen picture showed two typical shadows on the left beside the transverse process of the fourth lumbar vertebra and in the true pelvis corresponding to the course of the ureter. Israel's opinion was made the firm and somewhat hyperæmic kidney palpated and the stones found at the site of the shadows after isolating the entire ureter to the bladder. They were removed through a longitudinal incision. The recovery was uneventful.

SCHMIDT

Furness H D Supernumerary Ureter Opening  
Extravascularly *S & Gynec & Obst* 19 4, xviii,  
584 By Surg Gynec & Obst

The condition in the case was suspected from the characteristic history dribbling since birth and voiding normally. The aberrant ureter was discovered with difficulty and only after an injection of indigo carmin. At the operation it was found that the distal end of the ureter formed a fusiform sac an inch and a half long back of this the ureter was thickened and easily dissected out for another inch and a quarter. It was implanted into the bladder just to the inner side and back of the normal ureter of that side. The necessary room for the performance of this operation was obtained by a para-rectal incision through the vagina. The result was satisfactory.

Supernumerary ureters are quite frequent but those opening extravascularly are rare only nineteen others having been reported.

An analysis of the symptoms physical findings operative procedures with results and references to the literature are given. From the study of his and other cases Furness believes implantation through the vagina to be the operation of choice.

# BLADDER, URETHRA, AND PENIS

Swan R H J Tumors of the Urinary Bladder  
*Lancet Lond* 9 4 clxxx 1 309  
By Surg Gynec & Obst

Swan covers the subject from his own experience together with fifty eight cases that were then under his observation.

He considers the etiology as practically unknown. In that relation however inflammation bilharzial ova and workers in aniline dyes are mentioned. Outside of villous papilloma (benign) and carcinoma other tumors of the bladder are considered rare.

Local stress is laid upon the possibility of a non malignant villous papillomatosis showing malignancy long after operation. He reports five cases—8 4 2 1/4 and 7 years—in which sections showed no malignancy when the tumor was removed yet became malignant afterward. He looks with suspicion on any bladder papilloma covered with stunted villi or which have not those very delicate pedicles.

Carcinoma is claimed to be three times as prevalent as papilloma. The supposition is made that heretofore they have been looked upon as villous (benign) papillomatosis instead of villous carcinoma.

The symptom hematuria is considered a differential point of distinction of a papilloma when it entirely ceases at interval. Cystitis is frequently the associate of carcinoma yet foreign to papillomatosis.

A case is reported whereby ureter block occurred from a papilloma engaging the ureteral mouth from the inside. The kidney obstruction which followed was relieved upon the removal of the villous papilloma.

An unusual case is reported of villous carcinoma metastasizing in a young man following eighteen months after an attempted removal of the cancer. The trunk of the body from the umbilicus to the knees including the bony wall as well with the exception of the abdominal viscera was invaded.

In twenty three epitheliomatous cases reported seven were operated upon—two being complete resections. Recurrence occurred outside of the bladder in one in eighteen months in another in twenty months.

Swan's use of 50 mgs of radium within the bladder for twelve to twenty four hours has not resulted favorably yet he considers it applicable to non operative cases. CHARLES L BARNETT

Werelius, A Traumatic Detachment of the Bladder from Symphysis Pubis with Complete Severance of Urethra Use of Labia Minora as a Substitute for Necrosed Anterior Vaginal Wall *J Am M A* 9 4 lxxxi 722  
By Surg Gynec & Obst

The author reports a case of pressure necrosis of the anterior vaginal wall due to prolonged and difficult instrumental labor in which the urethra had completely disappeared and the bladder was entirely detached from the symphysis, and was suspended only by the ureters and the peritoneum covering its posterior surface. The case was seen five months after labor and gave a history of complete incontinence of urine since delivery with profuse vaginal discharge. When seen the patient was in a general run down condition and had lost considerable weight. Vaginal examination revealed an almost complete absence of the anterior vaginal wall and the bladder could be protruded far out of the vagina. There was no sign of any urethra. Two unsuccessful attempts were made to close the opening by bringing the edges of the remains of the vaginal wall together after freshening and undercutting them. The defect was finally closed by freshening and incising the edges of the labia minora along the outer and upper borders and dislocating them inward over the vaginal defect and suturing with chromicized catgut. C R O CROWLEY

Martin C The Correct Interpretation of Bladder Symptoms. *Med Fort* xli 9 4 xlv 77  
By Surg Gynec & Obst

The author lays stress on the fact that bladder symptoms have an antecedent mechanical or nervous etiology. He says in the vast majority of cases it is mechanical. He states that the three symptoms which force the patient to the physician are frequency pain and hematuria. He emphasizes the fact that the extravascular causes of these symptoms should be carefully studied and removed, if possible.

Of the intravascular causes of bladder symptoms the author discusses first stone in the bladder and lays stress on the frequent use of the cystoscope for the determination of the same. He also states that

frequently the etiology of stone is an enlarged prostate and that it will be futile to remove the stone in the bladder without removing the prostate.

The author next discusses tuberculosis of the bladder laying stress upon the point that an irritable bladder is frequently the first symptom of tuberculosis and quotes Karsl as saying that oftentimes nocturnal enuresis and thus particularly in the case of young anæmic children may be the single clinical symptom of a beginning tuberculosis the final determination of which must be made by the laboratory and the cystoscope. The author further states that an irritable bladder may show no cystoscopic findings whatever except possibly the halo described by Thomson Walker, that is the intimate connection of the ureter's blood supply with that of the area immediately surrounding the ureteric orifice.

He further discusses the question of tuberculosis of the prostate as a cause of cystitis and states that a careful rectal palpation will frequently develop nodular prominences, or a thickening at the end of the ureter may be felt per rectum or per vagina.

The author then discusses the effect of gonorrhoeal infections upon the bladder and says that a general gonorrhoeal cystitis is rare but infection of the trigone is frequent. He says that these cases offer no difficulty of diagnosis on account of the sudden seizures of pain, frequency, urgency and possibly a little blood following micturition.

The author discusses the question of stone in the prostate as a cause of bladder symptoms and recommends the free use of radiology in the diagnosis of these cases. He also touches on the question of hypertrophy of the prostate as frequently causing bladder symptoms.

The last half of the paper is given up to the discussion of the question of vesical symptoms consequent upon the spinal lesion. He emphasizes the fact that great care must be used in the diagnosis and recognition of these cases and that nervous diseases producing bladder symptoms should always be taken into consideration in the examination of all bladder diseases because great harm may be done to the bladder whose incompetency is due to a spinal lesion. The author lays great stress on the danger of catheterization in these cases producing an inflammation from which the patient never recovers.

The author likewise discusses the verumontanum and its inflammatory diseases frequently causing bladder symptoms and recommends a careful study of this organ as well as the seminal vesicles in every case of bladder disease. A. C. STOKES

Squier J. B. Surgery of the Hour-Glass Bladder  
J. B. J. 94 2222

By Surg. Gynec. & Obst.

Squier has reviewed the literature concerning the cure of vesical diverticula by operation and has further contributed toward the technique. Chute, Lerch, Lower, Bryan, Berger and Beer have either collected or reported cases. The one reported

by the author had a marked pyuria with a bacillus coli infection. The amount of residual urine was thirty ounces. Cystoscopy showed a diverticulum opening. Stereoscopic radiographical examination with 25 per cent argyrol outlined an immense diverticulum.

Upon operation, the diverticulum was found strongly adherent to the anterior walls of the rectum and sigmoid. The bladder was opened and two intestinal clamps placed so that one blade of each was in the bladder and one in the diverticulum thus approximating the posterior wall of the bladder to the anterior wall of the diverticulum. The two walls were then divided between the clamps and the cut edges sewed together with continuous catgut sutures. The upper part of the diverticulum was then excised and drainage established in the bladder and prevesical space.

Two months later the residual urine was from one to two ounces while the capacity of the bladder was twelve ounces.

The author's conclusions are that in a hour glass bladder division and suturing is the best method especially as this does not necessitate transplantation of the ureter but in some diverticula excision by Lower's method is the better one.

C. D. PICKRELL

Dor H. Urethrectomy without Suture in Stricture of the Perineal Urethra (Essai sur l'réthrectomie sans suture dans les rétrécissements de l'urètre périméal). Thèse de Doct. P. 93.

By Journal de Chirurgie

Dor criticizes the results of Heit Boyer's urethrectomy and describes a method which Escot has used 15 times. In this method the upper wall of the canal is spared.

The steps of the operation are as follows: (1) External urethrotomy incision, isolation of the fistulous tract and external liberation of the urethra and perineal tumor. (2) longitudinal incision of the urethra and resection with curved scissors of all the fibrous tissue including the urethral wall itself only the upper wall being spared. (3) a rubber sound is passed through the meatus toward the bladder. (4) the skin wound is sutured at the angles and the remainder left open. The wound is tamponed the tampon being changed the fourth day. The eighth day the sound is removed and the patient urinates entirely through the perineum. Every two days a bougie is passed beginning at 40 to 44 and in a little while reaching 60. Free irrigation of the urethra and bladder is performed at every dilatation.

In the cases reported by the author cicatrization took place between the twentieth and fifth days. In only one case a small fistula persisted which closed spontaneously about the twentieth day. Examination of the patients at a late date showed that they could not be considered radically cured. They must be watched and submitted to catheterization. GASTON PICOT



**Rich M and Mayer T** The Practical Value of  
Posterior Urethroscopy *in J Urol* 9 4 x  
224 By Surg Gynec & Obst

The first and perhaps most important cause of pathological findings in the urethra is gonorrhea. Here we may have either a soft infiltration comparable to that found in the anterior urethra in which the internal sphincter is swollen and the colliculus inflamed and presenting one or more projections or a hard infiltration resulting in stricture formation which is much less common. Proliferative changes represented by the formation of raspberry like polypi are frequent occurrences at the verumontanum. In chronic posterior gonorrhea such changes were present in two thirds of the cases examined and what is more they were present in almost the same proportion in those clinically cured of the condition.

Objective symptoms such as persistent discharge, terminal hæmaturia and hæmatospermatorrhœa may or may not be associated with the above pathological conditions. Conversely these conditions may exist without any symptoms whatever and in 46 per cent of the cases without the existence of any antecedent gonorrhea.

The authors also found numerous abnormalities in the urethras of patients suffering from symptoms of sexual neurasthenia such as erections and pollutions. They also found various types of prolapse of the mucosa and of granulomas in the membranous urethra. However they do not regard these changes as the cause of the symptoms (pollutions etc.) but rather as the result of the accompaniment thereof. In support of this view they point to the favorable results obtained by therapy such as internal medication which is not directed toward the relief of the local conditions as well as the failure of local treatment in some cases. In all such cases the authors feel that there is an unsatisfied libido which causes an increased sexual irritability resulting in masturbation thus in turn producing congestion of the parts and the pathological pictures above described. Erections and pollutions may result from a general psychopathic constitution without any local changes whatever. Similar findings in the posterior urethra have been described as the cause of sexual impotence. That this condition results from the exhaustion of a previously overexcited erection center as suggested by Finger is not accepted by the authors.

By first subjecting all patients to general measures and not proceeding at once to the local treatment the authors were enabled to divide the cases into two classes. The first consisted of real sexual neurasthenics who complained of indefinite symptoms, burning, the stickles feeling of heat and pressure in the urethra, tearing of the inguinal canal.

In 40 per cent of these subjects the posterior urethra was pathologically altered as in gonorrhea. In these men sexual symptoms were merely a part of an out-poken general neurasthenia. General measures or local applications which did not in any

way affect the pathological picture often caused a cure. The benefits of cauterization, etc. were but temporary. The second class comprised those who complained definitely of frequency, urgency and pain during urination. In 60 per cent of these cases there were pathological changes in the posterior urethra and here they were actually the cause of the symptoms for their removal was in the great majority of instances followed by a permanent cure.

The authors conclude that though modern endoscopy has thrown much light on many difficult problems it has led us to overestimate the importance of the local lesion especially in cases of sexual neurasthenia. H A MOORE

**Noré-Josserand G** Late Results of Urethroplasty by Tunneling and Skin Grafting in Severe Forms of Hypospadias and Epispadias (*Résultats Loignés de l'uréthroplastie par la tunellisation et la greffe dermo-épidermique dans les formes graves de l'hypospadias et de l'épispadias*) *J d urol* 19 4 393 By Journal de Chirurgie

The author studied the permanent results of his method analyzing 21 cases that were treated more than two years ago. Seven were penile hypospadias, 6 penoscrotal, 2 scrotal, 3 perineal and 3 epispadias. Some were operated on as long as 12 years ago, the average being 6 to 7 years. The canal in almost all cases was successfully reconstructed by the skin graft though the caliber was reduced — 10 to 13 by Charnière's sound — and it often had to be enlarged by internal urethrotomy. The urethra is elastic enough not to interfere with erection or urinary function and fistulae are exceptional since the author has used his new technique. He has observed the new urethra enlarge spontaneously in three cases — an important fact as it shows that an artificial urethra formed by skin grafting may take part in the general growth of the patient.

In three cases the caliber of the urethra examined 4 to 7 years afterward had remained stationary without causing any functional trouble. In two of these cases the new canal had passed successfully through an attack of gonorrhea. In two cases there was a temporary stricture which yielded after a few dilations; in 4 cases the stricture was permanent. The development of the stricture was slow but dilatation and internal urethrotomy only produced temporary improvement. J TA 114

**Stark S** Technique Employed in Fission of a Carcinomatous Urethra *J Gynec & Obst* 9 4 163 By Surg Gynec & Obst

Stark describes the technique employed in the excision of carcinoma of the urethra. The tumor involved the whole urethra including the internal urethral orifice. The technical features were as follows: A curved incision was made directly under the arch of the pubes about 4 cm in length and continued in depth until the retropubic space was reached. From this a longitudinal incision through the vaginal wall was made on the side of the in-

durated area in a posterior direction beyond the limitation of the involved tissues.

Two vaginal flaps were then reflected by dissection laterally toward the ischioanal canal exposing the triangular ligament underneath. Curved hemostats were then placed from the retropubic space downward on the triangular ligament close to the ischioanal ramus just before it was cut through, first on one side and then on the other until the whole tumor mass was disconnected. The object of this was to anticipate hemorrhage from the branches of the internal pubic vessels coursing through the triangular ligament which proved very satisfactory. The fibrous tumor mass was then incised along its anterior surface into the urethral canal and bladder which facilitated its final removal under ocular inspection. The vessels included in the hemostats were ligated by transfixion and the bladder orifice sutured to the vaginal wall in such a manner as to leave an opening only large enough to admit the introduction of a No. 10 soft rubber catheter which was fixed in situ for permanent drainage by means of a suture to the vagina. Anterior to the cervicovaginal opening the vaginal flaps were brought together in the midline by chromic acid suture leaving a space under the pubic arch for drainage of the rather large retrovaginal cyst. The sigmoid gland of both sides were likewise excised. Control of urine resulted.

Creenfelder L. A. Carcinoma of the Penis.  
*Internal J. Surg.* 1914 41: 61.  
By Surg. Gynec. & Obst.

The patient 40 years of age complained of a growth on the dorsum of the penis of six months' duration. Examination of the glans penis revealed a growth 4 cm. in diameter which was hard and smooth being hairy on its under surface. The left inguinal gland were enlarged and hard and the attempt to pass a catheter failed. The penis was amputated about 3 cm. from its base. The laboratory report disclosed epithelioma of the glans penis.

The author is reviewing the various reports as to whether or not there is increased frequency of carcinoma of the penis in proportion to which the patients are circumcised or not. Concludes that circumcision must be a great protective agent in carcinoma of the penis. He quotes a report from the Madras General Hospital of fifteen years ago prepared by British geographers who in a report of the institution of many years which had examined who were increased in the number of cases of carcinoma of the penis. Only one occurred in a circumcised Mohammedan. I. S. Kott.

Lionti G. A Case of Double Penis (in Fall on the penis). *Int. J. Surg.* 1914 41: 11.  
By Zentgraf J. G. G. (Graz).

A 33-year-old man had on the left side of the prepuce a small glandular structure of the size of a

that was somewhat higher up and more anterior. The apex of this second gland was provided with a small cutaneous orifice from which urine or semen had never been discharged. Palpation showed the presence of a second penis, which was some 2 cm. stunted. The second penis was removed by operation without difficulty. Its urethra ended in a blind pouch at a depth of 10 cm. STETTER.

## GENITAL ORGANS

Hardouin: Cancer of the Testis Operated upon by Simple Castration. Recovery with Recurrence after Eight Years (Cancer de testicule opéré par castration simple. Guérison au bout de 8 ans). *Bull. Soc. anat. de Paris* 1914 21: 143.  
By Journal de Chirurgie.

Hardouin reports the history of a man of 48 who was operated upon shortly after the appearance of a tumor. Histological examination showed a typical seminoma. Very recent since it was small in size and the numerous tubules were scarcely enlarged. Chevasu believes that a third of the patients with cancer of the testis operated on by simple castration may be considered cured. Hardouin thinks this figure a little too optimistic but that it should be remembered at this time when a more extensive and dangerous surgical treatment for cancer of the testis is being proposed which includes the removal of the tumor and the lumbar glands. It is probable that the most important factor in cure is the removal of the cancer at an early stage.

Hardouin and Pot: Two Cases of Tumor of the Testicle in Children (Deux observations de tumeurs de testicule chez l'enfant). *Bull. Soc. anat. de Paris* 1914 41: 150.  
By Journal de Chirurgie.

The first patient had a tumor of the right testicle since he was 10 months old. At eight months it began to grow rapidly becoming as large as a hen's egg smooth without nodulations or adhesions. The gland was removed. Examination showed it was a mixed tumor formed of tubules and cysts with cylindrical epithelium and of fibrous and cartilaginous tissue.

The second patient was 7 years old. He had a tumor of the right testicle as large as an adult's fist non-adherent not painful. Numerous subcutaneous vessels were visible. The tumor as removed. It was whitish and quite hard. Histological examination showed that it was probably seminoma. This anxiety of tumor is tremor of childhood. G. Mass.

Wilson H. W. A Post Graduate Lecture on New Growths of the Testis. *Chir.* 1914 41: 100.  
By S. R. C. Gynec. & Obst.

The author emphasizes the predominance of ectoplasia in the large of this last named condition but common in glands (cancer) and sarcoma origin. Note the testes are highly malignant spread in

the lymph vessels to the retroperitoneal glands—occasionally reaching the superclavicular group by way of the thoracic duct—and via the blood vessels to the liver and the lung. Metastases may occur extensively even though the original tumor remains small. Carcinomata frequently penetrate the tunic giving rise comparatively early to fungiform masses on the surface. Sarcomata show a tendency to be confined by the tunic. In both classes cystic degeneration is common giving rise to collections of fluid within the tumor mass, or often to hydrocele. Microscopically these tumors are very atypical occasionally the carcinoma may adhere to the columnar or spheroid type and the sarcoma to the round or mixed cell type. These growths are apt to be soft and nodular but occasionally smooth and hard.

Embryonic tumors so called because of their origin from embryonic tissues in the mediastinum are not uncommon. They have a tendency to flatten out the testicular body and are of slow growth requiring three to six years for their development. They may assume a rapid malignancy and this is especially true in the teratomata in contrast to the adenomata which malignancy is to be suspected if there are to be seen masses of nucleated protoplasm similar to decidua maligna. Endotheliomata are very rare.

The embryonic tumors are to be found from puberty up to thirty years sarcoma between the ages of twenty and forty carcinoma between the ages of thirty and sixty. There is an early loss of testicular sensation and a sense of a dragging weight with but little pain until the skin is involved. Palpation shows an enlarged testis with flattened epididymis. Hydrocele is often present. In abdominal cases of ectopia the first manifestation of the malignancy is frequently intestinal obstruction. Life expectancy is only about eighteen months and only a small percentage of cases have remained free from recurrence after three years. Extensive operation in an attempt to eradicate the paths of lymphatic invasion gives discouraging results. Experience has shown that operative interference which does not extend beyond the external ring gives better results, frees the patient from his pain and annoying ulceration, painless death ensuing soon from metastases. L. L. T. BROOK

Corner C. M. Further Experiences in the Treatment of Imperfectly Descended Testicles. *B. J. V. J.* 94. By Surg. Gynec. & Obst.

The author states that when confronted with an imperfect descent of the testicle the first fact to determine is whether the condition is temporary or permanent. If temporary no treatment is necessary. If permanent as evidenced by the recognition of a compensating hernia or the fact that the patient has reached the age of seven years, active treatment is necessary.

The author recommends great gentleness in separating the cord from the hernial sac. He also

states that frequently such testicles atrophy even after they have been brought well down into the scrotum.

The author states that testicles returned to the abdomen do not become malignant also that testicles returned to the intra-abdominal position maintain their power of internal secretion but lose the power of external secretion.

In the author's work for the past ten years his cases have been treated as follows:

- Orchidopexy about 10 per cent
- Orchidoceliopexy about 50 per cent
- Orchidopexy about 40 per cent

The treatment suggested for the condition of imperfectly descended testicles can be summed up from the point of view of the age of the patient as the condition is a congenital one.

At birth and up to the age of five years the case should be watched to decide whether the testicle is merely late in its descent or not. If a hernia is seen to be present an operation should be performed concluded by orchidopexy.

From 7 to 20 years of age an operation should be performed whether a hernia is present or not. Either orchidopexy, orchidectomy or orchidoceliopexy may be done.

Above 20 years of age orchidectomy should be done. V. D. LESPIVASSE

Thompson R. An Operation for Undescended Testicle. *Lancet* Lond. 94 cl xxvi 535. By Surg. Gynec. & Obst.

The author enlarges the scrotum by inserting a triangular elliptical flap cut from the edge of the hernial incision. This flap is turned down into the scrotum and sutured into the scrotal wound. By this means the scrotum is enlarged and, as it were, stiffened by a portion of tissue which contains no dartos muscle and therefore remains uncontracted. The simplicity of the operation and its successful results in two cases caused the author to place it on record. V. D. LESPIVASSE.

Clark J. B. The Surgical Treatment of Acute Gonorrhoeal Epididymitis by Epididymotomy. *Ann. S. G. Phila.* 94 lx 739. By Surg. Gynec. & Obst.

For those cases of epididymitis which are accompanied by unusually severe pain with considerable swelling and high temperature the author recommends his modification of the Hagner operation. The operative field is sterilized with two and one half per cent tincture of iodine and an oblique incision one and one half inches long is made downward and forward over the epididymal swelling. The incision is carried down to the tunica vaginalis which is opened the length of the skin incision. The edges of the tunica are picked up by hemostats. The thickened fibrous tissues covering the prominence of the epididymis are incised for one half an inch over the prominence of the swelling and a probe is passed gently in several directions into the substance

of the epididymis. If pus is present it is easily drained off. In all cases relief of tension and drainage was established.

The advantage of this operation is the lack of traumatism to the testicle as this organ is not delivered or the parts bruised by handling. In cases where the body of the epididymis or globus major are involved a freer incision or turning out of the testicle will be found to be best. A wick made of rubber dam serves as drainage. The author recommends one or two deep sutures of catgut, and two or three silk worm gut sutures for the skin. The drain is removed in forty-eight hours. On the fourth day the patient is allowed to get up. On the fifth day the stitches are removed. Six cases of bilateral epididymotomies are cited from the literature. Two of these patients have married and each has borne two children. H. A. KRAVZ.

Steiner P. The Surgical Treatment of Atrophy of the Prostate (U chirurgisch Behandlung der Prostataatrophie). *Ztschr f Uol* 914 148  
By Zentralbl f d. Ges. Chir u. Gynaegeb

The author had five cases in which the functional disturbances characteristic of hypertrophy of the prostate were present but in which the prostate was found to be small weighing from 3 to 5 gms. Its enucleation by Freyer's method was difficult because of induration of the periprostatic tissue. Histological examination showed atrophy of the glandular tissue. There was a history of gonorrhoea in all the cases. Palpation through the rectum against a sound introduced into the urethra was especially characteristic in the diagnosis. In all cases ectomy was completely successful recovery persisting after periods varying from 9 to 12 months. SCHWITZ.

Keyes, Jr. L. L. The Mechanism of Prostatic Retention. *Am J M Sc* 94 673  
By Surg. Gynec. & Obst.

The author distinguishes two clinical types of prostatic retention: chronic incomplete or complete retention and acute complete retention. Retention represents the interaction of two forces: the bladder muscle and the obstruction.

In considering the action of the bladder muscle the author considers the condition of the nervous mechanism as well as the condition of the wall. He believes that the progressive weakening of the bladder muscle is the main agency in the rapidity or slowness with which a patient passes from the first to the third degree of retention. A strong muscle will fight longer against an obstruction. That the muscle is not the only element in this case is shown by the fact that the blotting paper bladder is little more liable to incomplete relief by prostatectomy than is the bladder with a normal muscle. The author states his belief that in paralysis of the bladder muscle as in tabes the resulting retention is not solely due to weakness of the muscle as the Chetwood operation may result in improv-

ment. He cites cases proving this. He coincides with the opinion of Alexander in ascribing the retention of urine in typhoid and other wasting diseases to actual muscular weakness combined with weakness of the will and cites cases.

Under obstruction the author considers the enlarged prostate and the bladder neck. He believes with Sir H. Thompson that not more than half of the men whose prostates are enlarged suffer from retention and that retention occurs without hypertrophy. He believes that the size of the prostate has nothing to do with the amount of residual urine.

The rôle of prostatic hypertrophy in retention he believes to be as follows: Hypertrophy is not of itself sufficient cause for retention. In order to cause retention hypertrophy must interfere with the outflow of urine and may be due to deformity of the bladder neck or to actual compression of the urethra. This compression of the urethra is not usually an important factor as the urethra is usually dilated and a catheter is not obstructed in the prostatic urethra from the membranous portion to the neck.

The compression of even greatly enlarged lateral prostatic lobes probably has little or no effect on the outflow of urine. The author believes that the obstacle is much the same whatever the cause: whether it be middle lobe, lateral lobe or general hypertrophy or contracted bladder neck. This obstacle is the muscular ring at the bladder neck, which normally is an elevated ridge most prominent on the floor of the urethra because the roof is more fixed by means of the puboprostatic ligaments. In pathological conditions this bar of bladder neck rises up on the floor of the urethra as an abnormal obstruction. This is the mechanical cause of prostatic retention. In explanation the author assumes that as the bladder empties itself the trigone is somewhat elevated forming the flare of the funnel, which in the normal bladder begins in the prostatic portion and the remainder of the bladder closes down upon this funnel; the lowest and highest points in the bladder cavity lying posterior to the trigone and being emptied last. In retention the funnel is an inadequate one. The bladder neck fails to open as it should and the result of the effort to squeeze out the last drops of urine is to close the bladder neck. The closure should be interpreted not as a sphincteric gripping but as the drawing of the prominent lower lip of the bladder neck against the upper wall of the prostatic urethra in the form of a valve. The harder the patient strains, the tighter the valve closes.

Chronic retention is due fundamentally to a inability of the bladder sphincter to open until the bladder is partially full. Acute complete retention is due to a congestion or spasm at the bladder neck of such intensity as to apply the posterior lip of the sphincter against the anterior even when the bladder is full. Various combinations of obstruction, congestion, and spasm produce the many variations in the clinical phenomenon of prostatic retention and the gradual progress of the increase in the amount of

retention of urine as the time goes by is largely due to a gradual decrease in the strength of the bladder muscle. Prostatectomy should be only a means to an end that end being removal of the obstacle at the bladder neck although all other obstructions should also be removed. Technically the perineal route is at a disadvantage and the suprapubic is mechanically superior. H J POLKEY

Thomas J L. Note on a New Combined Method of Prostatectomy. *Lancet* 1914 1 1456 By Surg Gyec & Obst

The author follows a rather singular technique in carrying out his suprapubic prostatectomy. As soon as the bladder is opened and emptied of urine he pours about an ounce of pure tincture of iodine into the bladder before proceeding to enucleate the prostate. He then injects tincture of iodine through the meatus along the urethra into the prostatic bed. The operation is concluded by perineal drainage. HERMAN L KRETSCHMER

Legueu and Morel: Value of Eosinophilia in the Diagnosis of Surgical Diseases of the Prostate (Valeur de l'éosinophilie dans le diagnostic des affections chirurgicales de la prostate). *Arch urol de la cl de Vecker* 9 4: 295 By Journal de Chirurgie

In 193 Morel and Chabanet found eosinophilia in cases of adenoma of the prostate. Legueu and Morel have pursued this research further in order to find whether the examination of the blood could be utilized clinically in prostatic cases. They report the results of blood examination in 85 patients with different diseases of the prostate.

1 In 40 cases of adenoma of the prostate even when there were no septic complications there was a leucocytosis that amounted on an average to 12,000 per ccm. The polymorphous eosinophiles especially were increased in 36 cases out of 40 that is 90 per cent they were increased to 5 per cent from the normal 2 per cent. The eosinophilia disappeared when the adenomata were removed. The eosinophilia is due to local reaction of the prostatic urethra. Verha found eosinophiles scattered through the suburethral zone in sections of prostatic adenomata. This eosinophilia depends on the mere presence of the adenoma and is not in proportion to its size.

The blood in cancer of the prostate showed an increase in polymorphous to 87 per cent and a decrease in the eosinophiles to 0.4 per cent. Thus the blood picture in cancer of the prostate with hypo-eosinophilia is sharply distinguished from that of adenoma which shows hyper-eosinophilia. Examination of the blood may serve to make the differential diagnosis between adenoma and cancer of the prostate in difficult cases. Comparing the clinical and dermatological diagnosis and the later microscopic findings their results were as follows. Of the 40 adenomata 39 had been so diagnosed clinically.

ically. In 35 cases the blood diagnosis confirmed the clinical diagnosis of adenoma 4 times it was doubtful and it showed adenoma in the case which had been diagnosed clinically as cancer. Of the 31 cancer cases reported the clinical diagnosis had been cancer in 18 and adenoma in 13. Blood examination confirmed the 18 clinical cases in 10 cases it corrected the clinical diagnosis of adenoma in three cases both clinical and blood diagnoses were wrong. The authors conclude that blood examination often confirms the clinical diagnosis of adenoma of the prostate and often confirms or rectifies the clinical diagnosis of cancer. MAURICE CREVASSE

## MISCELLANEOUS

Eisendrath, D N. The Value of Radiography in the Surgery of the Urinary Tract. *J U & St M Soc* 914 xii 28 By Surg Gyec & Obst

Eisendrath calls attention to the great addition in diagnostic technique offered by the X ray shadowgraph the ureteral catheter and collargol injection of the ureter and renal pelvis. He emphasizes the necessity of careful preparation of the patient before the radiography so as to eliminate as much as possible any extraneous shadow due to accumulations within the digestive tract and explains in detail the variations in technique in pyelography and the use of the shadowgraph catheter. The article which is illustrated with helpful schematic drawings of the regions examined accentuates the necessity for careful differential diagnosis between lesions within and of the urinary tract and those without which are likely to cause confusion by reason of the similarity in shadows as shown on the roentgen plate. Proved extrarenal shadows are from—

- 1 Calcified areas due to tuberculosis of the kidney
- 2 Areas of chronic induration of the kidney
- 3 Atheromatous patches on the renal artery
- 4 Calcified retroperitoneal glands
- 5 Areas of ossification in the tips of the transverse processes of the lumbar vertebrae in the last costal cartilages, or of the last two ribs
- 6 Gall stones, pancreatic calculi or calcified areas in cancer of the head of the pancreas or enteroliths in the appendix
- 7 Calcification of ulcerations in the walls of the ureter

Extra ureteral shadows are due usually to one of the following:

- 1 Calcified retroperitoneal or mesenteric glands.
- 2 Enteroliths in the intestine or the appendix
- 3 Areas of calcification in sacrospinal ligaments, myomata of the uterus in dermoid cysts in the ovaries in the prostate or in the vas deferens
- 4 Phleboliths in the pelvic veins or areas of calcification in the iliac vessels
- 5 Calcification in the wall of the ureter

J S. EISENSTADT

# SURGERY OF THE EYE AND EAR

## EYE

Ellett E. C.: Some Remarks on Glaucoma. *J Trans St M Ass* 1914, 46r  
By Surg Gynec & Obst

Ellett finds the tonometer an instrument of precision for estimating the intra ocular tension 25 to 45 mm is placed as equivalent to +1 45 to 65 to +2 and above this to +3. Irrectomy leaves little to be desired in acute glaucoma while an excision in some fashion of a piece of the sclera best meets the indications in the chronic form. The latter cases may sometimes be held at a standstill by the persistent use of myotics. FRANCIS LANE

W Iton C. B.: Glaucoma as a Contributing Etiological Factor in Insanity with Report of a Case. *Ophth Rec* 1914, xxii, 7  
By Surg Gynec & Obst.

To relieve the intense pain in the eyes, the family physician administered opiates for several months or until the patient became blind. The patient's history was good and no history of insanity in the family could be obtained. The patient aged 69, had never previously had any disease of the eyes.

The tension taken with the Schiotz tonometer measured in the right eye 70 mm Hg that of the left 75 mm Hg. An Ellett operation afforded the patient relief from the pain. GLSTAUS I HOOLE

Fox, L. W. Modern Operations for Glaucoma with Especial Reference to the Ellett Operation of Corneoscleral Trephining. *Jl S Surg* 94, xxxi 30 By Surg Gynec & Obst

Fox refers briefly to the most important of the modern methods of procuring a permanent filtering cicatrix for the relief of glaucoma. Ellett's preparatory handling, steps of operative procedure and toilet of the wound are concisely described. No operation for chronic glaucoma has given the author greater satisfaction than the corneoscleral trephine. The treatment of the conjunctival flaps however was modified in several instances, wherein the Van Lint sliding flap was employed instead of the triangular flap recommended by Ellett. The Van Lint trephine with stop is preferred to other instruments. The most recent operation for glaucoma the T sclerotomy of Van Lint is briefly described but it is of too recent introduction to compare results. FRANCIS LANE

MacGillivray A. Subconjunctival Cataract Extraction. *Ed J M J* 914 xii, 4  
By Surg Gynec & Obst

The author has adopted a method of extraction similar to that described by several writers in the

past and finds it of value in cases in which prolapse of the vitreous is likely to occur those in which post-operative quiet is impossible and those in which conditions of asepsis are not ideal. The usual corneal section is made but the blade is turned just before cutting out so as to form a conjunctival bridge at least ten mm long. The lens is delivered under this either with or without iridectomy.

E. B. FOWLER.

Whiting M. H. The Extraction of Diabetic Cataract. *Practitioner Lond* 914, xxi, 573  
By Surg Gynec & Obst

Whiting says that it is not widely appreciated that the same dangers exist in the performance of ophthalmic operations under local anesthetics, as those recognized in general surgery with general anesthetics. A diabetic case may be progressing favorably but the disturbing mental effect of an ordinary cataract extraction may precipitate coma and a fatal termination. The best operation is simple extraction. Before operating the following points must be kept in view: (1) Glycosuria must be reduced to a minimum. (2) Acetone and diacetic acid must be absent from the urine. These two conditions are not always compatible when such is the case the second should take the prior place. FRANCIS LANE.

Jenkins, G. J.: Case of Hematoma Auris Operative Treatment. *Proc Roy Soc Med* 94, 11 Oct Sect 55 By Surg Gynec & Obst.

An excision was made and the blood removed two and one half hours after the injury. The blood which was mostly fluid but with some clots in the lower part was on the external surface only and extended somewhat into the meatus. The present condition seems to justify the procedure.

L. B. FOWLER.

Bennett F. W. and McKenzia, D. Acute Fulgent Otitis Media with Signs of Acute Labyrinthitis Recovery without Labyrinth Operation. *Proc Roy Soc Med* 914, 11 Oct Sect 50 By Surg Gynec & Obst

In this case a cortical mastoid operation as performed on a woman 9 years of age 7 weeks after the onset of an influenzal otitis media but fever vertigo and deafness continued. At a second operation, three weeks later the middle ear was opened but there was no evidence of fistula into the labyrinth and the wound was closed without opening it. The fever dropped and the patient eventually recovered. E. B. F. LANE

**Brown E. V. L.:** An Anatomic Study of a Case of Temporal Conus (Coloboma) in an Hyperopic Eye. *Arch Ophth* 1914 xlii 354  
By Surg Gynec. & Obst.

The essentials of the entire finding consist of a crescentic defect in the pigment epithelium and all the layers of the choriocoida along the temporal border of the disc in an eye of the hypermetropic type—33 mm axial length. The choriocoida stops a considerable distance temporal to the disc. At most the entire defect is bridged over and filled out by a fold or duplication of the retina. This is a direct continuation of the two nuclear layers of the retina. The nerve-fibers go over into the nerve-head in a normal way. The anterior layers of the sclera are absent over the floor of the conus, but the sclera is nowhere ectatic either behind the conus or else where.

In myopic conus the length of the eyeball is increased and the choriocoida torn away from the margin of the disc. The condition is therefore developmental and not congenital as must be assumed in the case from the short axis. In the non myopic eye the conus, or coloboma, is due to an overgrowth of the secondary optic vesicle at its junction with the optic nerve at a time when the mesoderm of the sclera and choriocoida has not yet been laid down. The retinal fold then effectively blocks the development of the choriocoida and sclera at the nerve and the conus results.

In the only other case reported that by Elschnig, the temporal conus (coloboma) was deeper and involved the optic nerve sheaths.

**Lake R.:** Patient after Operation for Aural Vertigo. *Proc Roy Soc Med* 94 94  
Sect 5 By Surg Gynec. & Obst.

The symptoms were of 7 years standing in a man 61 years old. No element appeared in the vertical plane and any attempt to move caused marked deviation to the right. The left ear was totally deaf. A complete vestibulotomy was done with relief from symptoms. E. B. FOWLER

**Tables, S. G.:** Two Cases of Ocular Disease Associated with Pyorrhea Alveolaris. *Brit Med J* 1914 735  
By Surg Gynec. & Obst.

The author reports a case of failing vision of two months' progress in an adult. Correction of a purulent discharge around the teeth resulted in the clearing of the vitreous spaces at first present and the return of vision with marked improvement in general health.

In the second case an iridocyclitis cleared rapidly after aural treatment. E. B. FOWLER

**Holden W. A.:** A Fifth Case of Acute Disseminated Nephritis with Retrobulbar Inflammation of the Optic Nerve. *Arch Ophth* 94 xlii 3  
By Surg Gynec. & Obst.

There was complete blindness of one eye and almost complete blindness of the other with subse-

quent restoration of useful vision in each. There was a lateral hemianopia in the field of one eye only. The history of the case is given in detail. Wassermann blood reaction was negative. Strychnin was administered. GEORGE S. HOLTZ.

**Milligan W.:** Cerebellar Abscess; Operation. *Recovery* *Proc Roy Soc Med* 1914 101  
Sect 23 By Surg Gynec. & Obst.

The abscess complicated a chronic running ear was diagnosed, opened and drained and the patient recovered. In the discussion JEWELL brought out the fact that in some cases there was a more definite localization of the pain immediately after the lumbar puncture. E. B. FOWLER

**Parker W. R.:** Report of a Case of Dermoid Cyst of the Orbit Producing Marked Exophthalmos, Relieved by the Kronlein Operation. *J. Mich. St. M. Soc.* 94 xlii 335  
By Surg Gynec. & Obst.

Parker reports the case of a woman aged 30 who had been troubled with unilateral progressive exophthalmos for six years. A cyst was removed from the orbit after a Kronlein resection of the outer wall. The cyst contained degenerated epithelium, old blood, dead hairs and much cholesterol. It is rare to find this form of congenital tumor within the orbit. E. B. FOWLER

**Reinhold C. H.:** Sclerocorneal Trephining for Staphyloma. *India M. Ga.* 1914 xlii, 81  
By Surg Gynec. & Obst.

Reinhold is satisfied that a reduction of anterior staphyloma can be effected by sclerocorneal trephine. It is remarkable that from 17 unselected cases operated upon a restoration of "quite normal" curvature resulted in 5 and nearly normal in 6 cases. The degree of staphyloma varied from medium to very large with a duration of from 3 months to 10 years. An improvement of vision was recorded in 5 cases. The best results are to be anticipated where clear cornea is present in the pupillary area in recent cases in which the scar tissue is still yielding, and in conical cornea. The author recommends that the trephine be done almost wholly corneally and with iridectomy. FRANCIS LAKE

**Wilder W. H. and McCullough C. P.:** Sporotrichosis of the Eye. *J. Am. M. A.* 1914 li 56  
By Surg Gynec. & Obst.

The authors report a case of conjunctival sporotrichosis in a student who had been working in the laboratory with cultures of various strains of sporotrichosis and on several occasions small capillary pipets containing emulsion of the organism were broken at a distance of 8 or 10 inches from the face. One evening he noticed a soreness of both eyes, together with photophobia. Later the lids were slightly swollen, the pain was increased and the surrounding lymph glands were quite tender on pressure. The pain, swelling of the eyelids and photophobia in

creased. The conjunctiva of the eyelids of both eyes was reddened and so swollen that the fornix rolled out in a mass when the lower lids were everted. In addition there were present on the palpebral conjunctiva and also on the fornices several grayish yellow slightly elevated spots varying in size from 0.5 to 3 mm in diameter from some of which the covering epithelium had been cast off so that they seemed like small ulcers. Numerous follicles appeared in other portions of the conjunctiva.

Seven days from the onset the general condition was worse the patient had headache and malaise the temperature was 101° the leukocyte count was 18,000. The following day the temperature was 101°. During the night a sudden pain occurred in the left knee on the internal side of the upper end of the tibia. In the morning the limb was very sore and painful on pressure or motion. Two days later there was pain in the left elbow, wrist, and the lower end of the right femur which was very sharp especially on pressure and motion.

The following day the pains were still persistent. The temperature was 101° in the afternoon the conjunctiva was much improved the ulcers had healed. In two months the lids were normal.

Cultures showed the colonies were typical of sporothrix each being distinct with a center rising in ridge formation like the peak of a mountain. Microscopically there was an abundance of long filaments and round or oval spores the latter were not only in the filaments but also free. The organisms were stained with the ordinary dyes and retained Gram stain. At the end of a week Gram positive oval bodies were seen in smears of pus from the eye these resembled sporothrix but were found only singly or in pairs no definite clumps being observed. Seven teen cases of sporothrix of the eye are reviewed.

Some of the clinical features of this infection are common to other conditions. Lymphadenopathy would be present with chancre of the conjunctiva, but in the initial lesion of syphilis it is very unusual to have such multiple erosions or ulcerations and scrapings from such an ulcer would probably show the characteristic spirochete.

Tuberculosis of the conjunctiva would probably not be so rapid in its course but it would be a week or more before the caseous tuberculous nodule would break down and form the ulcer whereas in sporotrichosis the little ulcers develop in a few days.

Pannaud's conjunctivitis presents more points of similarity and it is possible as mentioned by Morax that case of sporotrichosis may have been mistaken for Pannaud's conjunctivitis.

In the latter the vegetations on the conjunctiva are different from the follicles and the yellowish nodules of sporotrichosis. The adeno-pathy in Pannaud's conjunctivitis points to aseptic infection but all attempt to isolate organism from the lesions has failed. Recently however, Hoeft has observed a such nodules in organisms like leptothrix. On the other hand the diagnosis of sporotrichosis is easy for a reason from the ulcers or

nodules are inoculated on appropriate mediums and left at from 18 to 20 C for the organisms appear in from three to ten days.

Grout G H A Case of Permanent Impairment of Vision following Gastro-Intestinal Hemorrhage. *Arch Ophth* 1914 Jan, 34.

By Surg. Gynec. & Obst.

The author reviews the literature on the impairment of vision following excessive loss of blood. He believes in the Holden theory, i.e. that the retinal ischemia produces a degeneration of the ganglion cells. The man 66 years of age gave a negative history save for the hemorrhage which lasted three days.

GUSTAV F. HOGUE.

## EAR

Cunningham F M Chronic Suppuration of the Middle Ear. *J Am Soc Gt* 914 1.

By Surg. Gynec. & Obst.

It is the author's opinion that chronic suppuration of the middle ear is a more frequent condition than many think from clinical observation and that not a single case in which necrosed bone has been determined has ever been cured by irrigation.

It is strictly a surgical disease to be treated by thorough removal of every particle of diseased tissue regardless of the area it occupies in order to avoid the development of intracranial complications as statistics show that one case in eighty-eight has some intracranial complication.

The author gives the history of twelve cases illustrating his theory that chronic suppuration is a surgical disease curable if so treated before intracranial complications develop.

ELLEN J. PATTERSON.

Milligan W Malignant Disease of External Ear with Extensive Invasion of Temporal Bone. *Operation Recovery Proc R Soc Med* 1914. *Old Sect 3*. By Surg. Gynec. & Obst.

An operation was performed on a woman fifty-four years old in whom most of the right ear was ulcerated away and the glands at the angle of the jaw and in front of the stapes had become involved. After ligation of the external carotid the ulcerated area, the underlying bone and the glands were removed. Scarlet red in live oil and the Finsen light were used in the after treatment and for a period of six months there has been no evidence of recurrence.

T. B. FOWLE.

McKenzie, D Mastoiditis without Perforation of the Tympanic Membrane. *Proc R Soc Med* 1914. *Old Sect 9*. By Surg. Gynec. & Obst.

Following the removal of the tonsils and adenoids in a child of six years there was slight pain when the ear was touched but no genuine earache. The membrane was normal; perforation did not occur as there was no discharge from the meatus. On the third day the mastoid region became swollen and the



bone was opened at once. The mastoid cells were occupied by pus and granulations. Recovery was uneventful.

STUART LOW brought out the fact in the discussion that these cases were usually influenzal and that they usually followed an affection of the throat.

C. B. FOWLER

Canesteeo C. Parotid Fistula Following Mastoid Operations. *A. Otol Rh. & L. & La. j. vol. 9 4 xxii, 148* By Surg. Gynec. & Obst.

The author reports a case of parotid fistula from the lower end of a mastoid incision the fistula appearing immediately after the operation which had been performed two years previous. The usual treatment of galvano-cauterizations and injections of tincture of iodine proving unsuccessful Beck's paste was used and two injections permanently closed the fistula.

In reviewing the literature the author was able to find only a single case of fistula of the parotid following immediately upon the operative intervention. There were four other cases in which the fistula appeared much later.

Concerning the cause of these early fistulae the author believes that they are due to an operative wound of the salivary gland due to one of two conditions: (1) An anomalous conformation of the parotid that permitted part of the same to cover a considerable part of the external surface of the mastoid. (2) An abnormal location on the mastoid of a gland somewhat hyperplastic on account of past acute or chronic inflammatory processes that took a latent course in which case the fistula would have followed a lesion of the parotid due not to the incision but to the manipulations in detaching the perosteum made more difficult by the new formation of very strong adhesions. OTTO M. RORR

Beck O. Fistula Symptom in Non Suppurative Diseases of the Ear. *A. Otol Rh. & L. & La. j. vol. 9 4 xii 53* B. Surg. Gynec. & Obst.

The author reports two cases in which movements of the eyeball were obtainable by compression or aspiration of air in the external auditory canal in both of which the drum membranes were normal. One case was that of a little girl with hereditary lues and this case showed with compression a low movement of both bulbs; the other case a man with acquired syphilis showed a fistula nystagmus with rotatory and horizontal components. In neither of these cases was any history of suppuration obtainable and the condition of the ear-drums spoke against such possibility.

As to the question of how it is possible in the absence of suppuration with an intact ear-drum and presumably intact ossicle chain to produce bulbous movement through increase or decrease of the air pressure in the external auditory canal, three explanations are offered: (1) In the intensity of the air-pressure increase. (2) In the favorable or unfavorable circumstances through which this increase

of pressure can be transplanted into the labyrinth (3) in the irritability of the labyrinth itself.

The first explanation is disregarded by the author because all cases were submitted to the same degree of pressure. The third explanation is likewise disregarded from Alexander's own experiments. The second explanation seems the most plausible. As to the question of where upon the lateral wall of the labyrinth the air compression or aspiration produces its effect the author is of the opinion that an abnormal mobility of the stapes is, in all these cases of normal middle ear, the chief explanation of the phenomena, both of the slow movements of the eyes and the typical fistula nystagmus since the anatomic conditions on the inner wall of the ear seem to speak against the possibility that any other place can be regarded as the point of attack for the irritation.

Both of the cases cited showed more pronounced subjective and objective symptoms by compression than by aspiration. OTTO M. RORR

Stein O. J. Syphilis of the Ear. *A. Otol Rh. & L. & La. j. vol. 9 4 xxii, 6* By Surg. Gynec. & Obst.

The subject is divided for convenience of discussion into lessons as they affect respectively the external ear, middle ear, inner ear and intracranial regions.

In the external ear the chancre or *ulcus durum* is hard and infiltrated usually single and umbilicated. *Spirochaeta pallida* may be found on the slide and the neighboring lymph glands are enlarged and sensitive. The usual location is about the external meatus. Lesions of the drum occur as a papule or minute gumma.

The secondaries are in the form of condylomata at the posterior auricular attachment but when found about the entrance of the meatus they resemble granulations or polyps. The maculopapular eruption has been observed in the canal and on the drum.

The tertiaries are manifested by periostitis of the bony canal and by gumma.

In the middle ear lues is considered a common cause of disease but there is no description that will characterize a middle ear syphilis clinically. An endarteritis of the mucous membrane and a periostitis of the bony walls, aside from gumma constitute most of the pathology in this region. Lesions of the tube in the primary form may be seen at the faucial end as secondaries it appears as an erythema or as pearl-like plaques.

In the inner ear the symptoms are like those of any other nerve deafness without the vestibular symptoms. The deafness comes on quite suddenly in fact often over night or after some prolonged exposure or exertion. The pathology consists of a round-cell infiltration and hyperplasia of connective tissue substance especially of the perosteum. There may be a serious labyrinthitis following a severe hyperemia and even

pus new bone formation chronic endarteritis and hemorrhage into the fibers of the cochlear nerve leading to atrophy particularly in the basal coil and the cells of the spiral ganglion. Gummata may be found in the petrous bone. Periosteal thickening causing pressure in the internal auditory canal may result in paralysis of the seventh and eighth nerves.

In the intracranial region the lesion may be in the cortex in the mid brain or the nuclei in the cerebellar pontine angle and in the cerebellum. The pathology is meningitis endarteritis and gumma. In the diagnosis the points to be considered are a rapid onset prodromal illness or at least of severe legible slight or absence of tinnitus associated prostration of patients of cerebellar character normal drum and tap tubes as strongly presumptive of intracranial lesion. Otto M. Korr

Scott S. J. An Uncommon Form of Malignant Disease of Ear. *J. of R. J. Soc. Med.* 1914. Vol. 7. Sec. 1. By Surg. G. C. & Obst.

The pathological findings in the rat's growth revealed a rowent ulcer with large numbers of keratinized epithelial cells. (Isular metastases had occurred.) I. B. L. 112.

Shambaugh C. E. The Semicircular Canal and the Function of Equilibrium. *J. of R. J. Soc. Med.* 1914. Vol. 7. Sec. 1. By Surg. G. C. & Obst.

The author's conception of the origin of the labyrinthine impulses through which the semicircular canals play their part in preserving the equilibrium of the body is that these impulses originate from the hair-cells of the crista; that they are the result of a constant stimulation. The normal stimulation of the hair-cells of the crista is brought about by the impaction of endolymph currents against the utricles resulting in an interaction between the pulsed and the hair-cells. This the author believes is kept up in the labyrinth by the pulsations associated with each beat of the heart because with each pulsation there must be a

rise and fall of intralabyrinthine pressure and with each increase and decrease of intralabyrinthine pressure there must result a slight to-and-fro motion of the endolymph which would be sufficient to keep up a constant stimulation of the hair-cells on both sides of each crista.

In order to understand the clinical phenomena resulting from unilateral disturbance of labyrinthine tonus—which are (1) an increase in tonus from the affected labyrinth produces nystagmus toward the same side (2) a complete suppression of tonus in the affected labyrinth results in a nystagmus toward the opposite side and (3) an intracranial irritation produces nystagmus again toward the affected side—the following facts regarding the physiology of these canals must be kept in mind.

1. The impulses from each canal stimulate only those muscles the movements of which lie in the plane of that canal.

2. A motion of endolymph in one direction in a canal stimulates only those hair cells on the side of the crista receiving the impact. In order to stimulate the hair-cells on the opposite side of the crista, an endolymph current in the opposite direction is necessary.

3. An endolymph current in one direction in the canal stimulates the muscles which produce movement toward one side; an endolymph current in the opposite direction stimulates the muscles which produce motion in the opposite direction.

4. A greater stimulation results from an endolymph current in one direction in a semicircular canal than in the opposite.

5. In all three of the semicircular canals the greater response is obtained from those endolymph currents which stimulate the muscles producing nystagmus in the same side.

From the above it is evident that impulses emanate from each canal producing nystagmus in either direction; the former always being those which produce nystagmus toward the same side. These facts explain the symptomatology of nystagmus to the side of that labyrinth which has become affected by inflammatory processes. Otto M. Korr

# SURGERY OF THE NOSE, THROAT, AND MOUTH

## NOSE

Alexander L. D. Adenocarcinoma of the Nose  
*Chronologic Review and Case Report* *J. Otol Rhinol & Laryngol* 1914 xxiii 97  
 By Surg Gynec & Obst

A study of the 21 cases in the literature shows that adenocarcinoma which the author defines as an adenoma which has undergone carcinomatous development sections of which show a pernicious proliferation of the glandular cells showing areas of confusion in their arrangement and resulting in penetration of the basement membrane is essentially a disease of the cancerous age though an early onset is possible as is evident from two of the cases in which the ages of the patients were 22 and 23 years respectively. The influence of sex is negative as is the side involved.

The predilection for the middle turbinal and ethmoid region as evidenced in 13 cases is significant in view of the imperfect surgery performed in that region.

Absence of pain even when extensive in extent of adjacent structures has occurred is a noticeable fact. The absence of lymphatic involvement is more apparent than real.

In the opinions of the authorities quoted the outlook is most hopeless but the author believes that better results will be accomplished by the routine examination of polypoid growths leading to the early recognition of those showing beginning malignant changes and the discovering of coexisting pedicled malignant growths. Otto M. Rorr

Kahn H. A Short Study in the Etiology of Nasal Hydrorrhea with Case Reports *Otol Rhinol & Laryngol* 1914 xxiii 94  
 By Surg Gynec & Obst

There are two types of nasal hydrorrhea (1) The cerebrospinal type in which there is a definite anatomic loss of continuity in the skull and a hiatus is formed through which the fluid pours into the nasal cavity (2) the pure nasal type which may vary from the parovascular hiatus to the almost painless non-irritated variety with only an abnormal watery discharge from the mucous lining of the nose.

It is the latter type which the author discusses and which he believes is disturbance of the sympathetic nervous fibers in the nasal mucosa caused by some irritant or by nervous shock similar to a tortured animal giving rise to a change in the function of the fibers and causing vasodilatation and excretion of watery fluid.

Two cases are reported in support of this view. In the first the girl was tormented by her work and

the realization of her immense responsibility in the second case the rhinorrhea followed in a short time after the death of a parent throwing on an erstwhile carefree girl the support and responsibility of a family. Otto M. Rorr

Sobotky I. A Note on Nasal Synechia *Am J Surg* 1914 xxviii 180  
 By Surg Gynec & Obst

The author considers synechia usually the result of operations or ulcerative processes in the nose to be treated only when they give rise to symptoms as the permanent cure is one of most difficult problems confronting rhinologists.

After the removal of fibrous synechia by operation or electric current re-forming of the band must be prevented by the use of some mechanical device like mica scales celluloid or hard rubber plates and the patient must be seen frequently until complete healing has occurred. ELLEN J. PATTERSON

Wylie, C. B. Physiologic and Pathologic Relations of the Eye and Accessory Sinuses of the Nose *Laryngol & Rhinol* 1914 xxiii 408  
 By Surg Gynec & Obst

In the chronic non-suppurative form of sinusitis, the ocular manifestations will be more obscure and uncertain than in the suppurative variety.

Opinions differ somewhat as to which sinuses are most frequently involved in producing these obscure eye symptoms but the consensus of opinion is that the ethmoidal, sphenoidal, and maxillary sinuses in the order named are most frequently involved.

The orbit is from one half to two thirds surrounded by bony cavities which are in direct communication with the nose consequently pathological changes of these cavities may profoundly affect the ocular structures.

The immediate and pronounced favorable results obtained from surgical treatment of the accessory cavities should be proof of the relationship existing between the nose and the eyes.

ELLEN J. PATTERSON

Lubman M. Improved Method of Removing the Posterior Tip of the Inferior Turbinate *Laryngol & Rhinol* 1914 xxiii 394  
 By Surg Gynec & Obst

With a colored thread tied by means of a sailor's knot to the center of the wire loop of the snare the author passes the snare along the floor of the nose slightly further than the tip of the inferior turbinate keeping the thread directed to the septal side. By pulling the thread with the left hand the wire loop will bend at right angles to the tip and encircle the hypertrophied mass. ELLEN J. PATTERSON

## THROAT

Henke F. New Experiments as to the Physiological Significance of the Tonsils (Neue experimentelle Feststellungen über die physiologische Bedeutung der Tonsillen) *Arch f Ls u ges Rk d* 914 xx iii 93

By Zentralbl f d ges Chur u i Grenzgeb.

To study the relation between the lymphatic system of the nasal cavity and the tonsils, Lenart injected water and tissue fluids containing insoluble materials into the nasal mucous membrane of living animals and he could demonstrate the granules in the tonsils 24 hours after the injection. In order to get an exact answer to the question of the relation between the lymphatic system of the nose and the tonsils, Henke went over Lenart's experiments and came to the same conclusions. Then he undertook similar experiments on patients. He injected very small quantities of sterilized fluid containing soot into the nasal mucous membrane. After periods of from six hours to six days the tonsils were removed and as a rule black particles of soot could be demonstrated their distribution in the microscopical specimen showing that they must have reached the tonsils through the lymph vessels. If the tonsils were removed a few days later the soot particles could no longer be found they had been brought to the surface of the tonsils by the lymph stream and excreted. After the injection of the fluid containing soot into the gums the soot particles could also be found in the tonsils showing that there are lymphatics connecting the gums and tonsils. In order to prove beyond a doubt that the soot particles are transported by the lymphatics and not by the blood the same experiments were performed on the cadaver with the same results.

These experiments show that the function of the tonsils is similar to that of the ordinary lymph-glands. They serve to form new white blood cells and act as a filter for the lymph that flows through them there is one important difference in the function however. The organism sends foreign substances through the lymph-vessels to the free surface of the tonsil projecting into the pharynx in order to get rid of them in this way. This free surface is greatly increased in extent by the crypts. The tonsil therefore under normal conditions is a protecting organ but when it is diseased so that external excitation interferes with it becomes a reservoir for harmful toxins and must be radically removed as a source of danger. **ASHLEY**

Hanson Makuen G. Surgery of Facial Tonsils, as it Relates to the Functions of the Tongue and Soft Palate in the Production of Voice. *Laryng scope* 94 xxii 508

By Surg Gynec & Obst.

The author urges greater conservatism in tonsillar surgery basing his arguments upon a thorough study of the mechanical functions of the tonsil in phonation articulation and deglutition.

The systemic functions of the tonsil may never be

known because of the difficulties which arise in making the necessary investigations but the functions of the tonsil in phonation and articulation have been determined by a study of its anatomical relationship to the tongue soft palate and larynx.

The tonsillar surgery of childhood should be as conservative as possible because then if ever the tonsils are exercising their systemic functional activities and the tonsillar surgery of adult life should be conservative because of the mechanical functions of the tonsil in artistic vocalization.

**ELLEN J. PATTERSON**

Beck J. G.: Cancer of the Larynx with Special Reference to Radium Therapy. *J. Otol Rhinol & Ls* 914 xxii 66.

By Surg Gynec & Obst.

The author states that he has seen no permanent cure of laryngeal cancer by radium therapy but he draws the following conclusions from the four cases which he has thus treated and now reports:

1. None of these cases of carcinoma of the larynx ran the course that similar cases do without radium therapy.

2. Distinct destructive changes, even microscopically proved of the cancer were observed.

3. Pain was practically absent.

4. The action of the radium differed in some of the cases, as in two the growths disappeared at least for a time while in two they did not in fact the cancer grew.

5. The effect of the radium on the salivary apparatus was very distinct.

6. General symptoms similar to the cachexia, but still differing in some ways could be seen whenever the radium was used for any prolonged period.

7. From the positive results obtained by the writer in some of the superficial carcinomata of the nose mouth and palate and from the good results of others who treat superficial cancers, it is the belief of the writer that much larger doses of radium element employed in the treatment of carcinoma of the larynx would possibly create such conditions especially if employed early. The author has been employing 10 mg radium element.

**OTTO M. ROSE**

Johnston R. H. Straight Direct Laryngoscopy Bronchoscopy and Esophagoscopy. *Am J Surg* 94 xxiii 8

By Surg Gynec & Obst.

The writer cites cases showing the value of direct methods with the head straight and believes these methods are worth learning however expert the observer may be with the mirror. This applies especially to children where the use of the mirror is attended with great difficulty and lives may be saved by the use of the direct laryngoscope by making an early diagnosis of edema or subglottic swelling and the early institution of treatment. This method is also of use in the diagnosis and treatment of chronic laryngitis in adults, edematous laryngitis, and perichondritis though these

latter may also be successfully cared for by the in direct method

With the direct laryngoscope a differential diagnosis of simple acute edematous subglottic and membranous laryngitis can be made. Membrane in the last case is easily recognized and prompt administration of antitoxin would probably do away with the necessity for intubation. In removing a tuberculous epiglottitis it is much easier to see what is being done by the direct method and hemorrhage is much more easily controlled by direct pressure. This also applies to tuberculous of the rest of the larynx and there should be no hesitancy about removing through the tube as much of the diseased tissue as may be necessary. The cautery may also be applied with ease through the tube. Singers' nodules are best treated by removal through the direct laryngoscope with the head straight and by using a small tube. This is easily accomplished without injury to the cords and if skillfully done the voice rest cure is never necessary.

Laryngeal papillomata in children can almost always be diagnosed with ease and cured by removal and treatment with the high frequency spark through the tube. The author uses a spark of about one fourth inch and the tumors melt away rapidly. Many successful cases are cited. In the treatment of stenosis of the larynx direct laryngoscopy occupies the first place. An exact diagnosis can be made and the cicatrized tissue cut through more safely than can be done by any other method. The stenosis can be cut through directly and a Rogers tube inserted after the proper dilatation. Several cases of foreign bodies in the larynx and one case of pemphigus are reported. H. emphasizes the value of having the head in the straight position in direct laryngoscopy and believes it is an absolutely safe method under normal conditions. Even with contra indications such as arteriosclerosis the use of a small tube and the straight position of the head make the method practically safe. It is almost as quickly used as the mirror when the operator becomes expert. In almost every case in adults local anesthesia is used. Elypin or novocaine are the anesthetics of choice except in children where no anesthetic at all is employed.

GEORGE M. COATES

## MOUTH

Brown G. V. I. The Surgical Treatment of Post Operative Palate Defects. *J. Am. Med. Ass.* 1913, 139. By S. R. G. G. et al. Q. 4

Immediate reoperation when the sutures of a previous cleft palate operation fail to hold and when sloughing of the parts is actively destroying tissue at the line of apposition is not an advisable procedure. Such benefit as may have been secured in this way has probably not resulted from an improved local resistance due to leucocytosis as reported but for the reason that separation of the

mucoperiosteal tissue was more efficiently accomplished at the second than at the first attempt. Thus tension was more effectually overcome and the result consequently better.

A period of from nine months to one year should elapse before the same kind of operation should again be done because it takes that long a time to reestablish circulation in these tissues sufficiently to give them a dependable resistance.

In undertaking the surgical closure of palatal defects the question invariably arises, Shall tissue to cover the opening be secured by dissecting free a sufficient area from one side and turning it over so that the structures are reversed with an attached pedicle on the inner border of that side and suturing the free edge to the freshened border upon the opposite side in accordance with the principles governing the Davies Colley and other similar operations in the performance of uranostaphylorrhaphy or shall mucoperiosteal flaps be raised and brought together by taking advantage of the arch of the palate supplemented by liberating incisions upon each side to aid in effecting coaptation along the central line after the methods of Von Langenbeck as modified at the present time.

Every effort should be made to gain the desired results without disturbing the natural relation of the mucoperiosteum to the bony portion of the palate whether the opening be large or small. The parts should be kept in such form that subsequent granulation of the wound surfaces will tend to fill in any opening that might still exist and if it does not fill in completely by granulation the result upon the surrounding structures will be favorable rather than unfavorable to successful closure at a later operation should one be necessary. The loss of a flap so raised and reversed as to leave a corresponding surface of bone denuded might render further surgical operative measures practically useless because this portion of the palate would not be completely restored and any such bare surface would at best only be covered by a thin layer of tissue that would or be dependable or serviceable for flap purposes.

The contraction of scar tissue in these cases usually gives a shape more or less like a funnel to the hole in the palate with the slope more marked in a direction from above downward toward the outer surface. If complete joining of the tissue at the inner border of the palate opening is made entirely through from the palatal to the nasal surface much valuable tissue will be lost unnecessarily. If raw surfaces are secured by splitting the tissue without paring the borders there is too much of a tendency to resumption of the original form of the tissue borders during the healing process and this is not favorable to union along the line of coaptation. In these cases tension should be overcome by freeing the mucoperiosteal flaps from the bone surfaces as for uranoplasty according to the modified Von Langenbeck method. Cicatricial tissue should be severed by a thin bladed knife at just the right angle to

pass between the soft tissue and the bone without injuring the former.

The denudation of the tissue border surrounding the opening is best performed by following the slant of the opening sufficiently to give a broad raw surface up to the point at which the constriction is most evident. Splitting from this point all around will then give an added thickness without undue loss of tissue.

The inequalities due to wrong coaptation particularly in the region of the soft palate must be overcome. When the borders are loosened from the bone surfaces and ready to promote coaptation of the flaps in the central line without tension this must be done in such form as to give the nearest possible approximation to normal lines. Not infrequently when several unsuccessful operations have been previously performed all that can possibly be accomplished is readjustment of the parts which will make complete closure later on more easily secured. When this is accomplished any defect which may still remain is readily closed but if it be overlooked the result may leave the palate in a worse condition instead of better. When there is almost total absence of tissue on one side due to extensive sloughing or ill advised destruction at the previous operation with the tissue full upon the opposite side, it is sometimes necessary to bring about the transposition of good tissue from one side to the other so that at the final operation there may be at least a reasonable measure of tissue upon both sides from which to construct flaps. This may be done by making a complete closure of the opening and carrying the flap from the good side to the poorer one in such a way that tension will be so distributed as to cause the opening to occur midway between the two points. In a number of instances the author has closed perfectly palate fissures that seemed to be utterly hopeless because there was practically no visible tissue left upon a sufficient portion of one side of the bony palate.

Bloodgood J. C.: Cancer of the Tongue Based upon the Study of Over One Hundred Cases. Maryland M. J. 94 Jan., 03.  
By Surg. Gynec. & Obst.

It has been demonstrated by the author that failure to cure fully developed cancer of the tongue is due chiefly to the neglect of removal of the muscles of the floor of the mouth below the cancer and that the high mortality after operations for cancer of the tongue is due chiefly to the removal of the floor of the mouth without removing a section of the lower jaw. If operation with the electric cautery is done within a few weeks after the onset preserving the center of the lesion for microscopic study the probabilities of cure are almost 100 per cent. Previous operation have been too extensive both upon the tongue and glands of the neck.

Cancer of the tongue infiltrates into the glands of the neck through the floor of the mouth, and lack of involvement of the glands does not preclude infiltra-

tion of the floor of the mouth. It is impossible to close the opening in the mouth after removal of the tongue floor of the mouth and the glands, unless the jaw be resected. If done without resection, the mortality is almost 80 per cent.,—from pneumonia or late infection of an oral fistula.

In November 1910, in a case of early lingual cancer the author for the first time removed the right half of the tongue, the right floor of the mouth, the right half of the lower jaw and the glands of the right side of the neck in one piece. The wound was closed by suturing the mucous membrane of the right cheek to the remaining half of the tongue. The patient swallowed at once after the operation and no recurrence followed. As the removal or resection of the lower jaw is mutilating the author has attempted to produce the same results another way.

In a subsequent case the glands were first removed, their connection with the floor of the mouth below the lesion was thoroughly burned with a cautery and the wound was closed. Then the lesion in the tongue or floor of the mouth was attached with the cautery the application usually being repeated two or three times until everything was destroyed down to the area first cauterized from below. The healed skin-flap of the first operation forms the floor of the mouth and prevents an oral fistula.

The majority of cases seek surgical aid at an unnecessarily late period. In early cases there is always something to be seen and felt in the tongue or floor of the mouth if attached at once, a local operation with the cautery should suffice. In a little later stage removal of the glands and repeated cauterization of the mouth in still later stages resection of the jaw must be done. The author advises that this should be done in three stages. First thorough removal of the glands with cauterization of the floor of the mouth from the neck wound second, cauterization of the lesion within the mouth third removal of the jaw and cauterized area.

A study of cases up until 1908, a period of 18 years, compared with those observed during the past five years, shows the influence of education. The very early pre-cancerous lesions have increased from eight to thirty per cent. The late and inoperable cases have decreased from eighteen to ten per cent. The cures have increased from twenty-one to fifty per cent.

The author considering cases operated upon by himself—42 in all—reports no post-operative mortality and so far but one patient has died from recurrence.

In Bloodgood's opinion the technique has been conquered and if the patients can be educated to come early the disease will probably be conquered.  
H. A. Potts

Murphy J. B. Carcinoma of Tongue at Age of Thirty-One. Surg. Clin. J. S. M. p. 179, 93, 2.  
By Surg. Gynec. & Obst.

Some 5 or 6 years previous the patient had had soreness on the side of the tongue but physician

told him it was nothing serious. A year later there was a discoloration on the right side. The organ remained a little sore tender and discolored until some months later when acid was applied. Although formed and the lesion gradually increased. Later he had consulted a physical culture exponent who pronounced it tuberculous and he had been taking treatment ever since. About three weeks previous to admission there had been noted a swelling under the mandible. A similar mass had appeared several months before but had disappeared. For a year preceding admission the lesion had been abraded like an ulcer discharging a little pus and occasionally caseous particles. Some four months before admission the patient began having constant dull pain around and in the right ear.

Upon examination the right side of the tongue was found to be hard and woody as far as could be felt including the whole base. A sinus was found leading down to a tooth and discharging pus slightly. There was an enlarged node under the mandible. A piece was removed and many slides showed squamous-celled carcinoma. The patient was ad-

vised to have radium treatment and X-ray exposures. The case was then inoperable and practically hopeless.

Murphy J H: *Tuberculoma of the Tongue*  
S. G. Clin. J. B. Murphy 1913 N. Y.  
By Surg. Gynec. & Obst.

The patient was a woman of 21 who had first noticed a mass on her tongue about 6 weeks previous to admission. It was the size of an almond near the midline and about 1.5 inches from the tip. The mass was hard and indurated, had never ulcerated or bled and had no enlarged nodes. She had no continuous pain but experienced discomfort in talking and eating and hard substances made the tumor extremely painful. The family history was negative for tuberculosis and carcinoma. Wassermann and tuberculin tests were negative. Notwithstanding the fact that the process was active the tuberculin test was negative. The gross appearance was that of sarcoma and a piece removed proved to be tuberculoma and injections of tuberculin were ordered.

# ABSTRACTS OF SOCIETY PAPERS

## ANNUAL CONGRESS LARYNGOLOGICAL ASSN

MEETING HELD AT ATLANTIC CITY MAY 25-27 1914

Hopkins, F. E.: Report of a Case of Septic Infection of Parotid Glands. *T Am Lary* vol 1: Atlantic City 1914, May. By Surg Gynec. & Obst.

Each intralobular duct is a branch of a subdivision of the main duct so that if a septic infection results in closure of these ducts drainage is impossible and dissection of the gland becomes necessary. Many important vessels and nerves traverse the gland. Before resorting to dissection Steno's duct should be probed. Otto M. Rorr

Hallstead T. H. Endonasal Operation in Tumor of the Hypophysis. Report of a Case in a Female Nine Years of Age. *T Am Lary* vol 1: Atlantic City 1914, May. By Surg Gynec. & Obst.

The operation was performed in three stages:  
1. Preliminary operation March 13, 1914, upright position with cocaine and adrenalin. Removal of both middle turbinates and exenteration of right anterior and posterior ethmoid cells.

2. Second operation local anasthesia, submucous resection of entire septum, anterior wall of both sphenoids and the sphenoidal septum removed.

3. Sixteen days later the third operation long sella removed, dura incised, following which there was an immediate gush of more than one half an ounce of yellowish fluid.

Cornish of New York takes out the posterior part of the septum instead of doing submucous resection. He takes out the rostrum and gets to the sphenoid that way. He does the operation in two to three stages. Otto M. Rorr

Delaan D. B. The Employment of Skiagraphy in the Diagnosis of Enlargement of the Thyroid Gland. *T Am Lary* vol 1: Atlantic City 1914, May. By Surg Gynec. & Obst.

Because of the importance of thyroid enlargement when considering the operative risk the author speaks of the importance of skiagraphy in its recognition.

Cosley of New York spoke of a case of malignant disease of the thyroid simulating clinically a goiter which was diagnosed by the roentgenograph fairly well.

Silberly of Detroit spoke of the interrelationship between the thyroid and adenoids, and thyroid and thymus, and because of this fact of the constant danger the operator is in when operating on tonsils and adenoids.

Hubbard of Toledo spoke of an enlarged thyroid

producing asthma in children and of the permanent atrophy of the gland after seven treatments with the X-ray.

Swain of New Haven spoke of a case of thymic asthma in which thymic reduction was obtained by the use of adrenalin ointment three to four times daily.

Kandall of Philadelphia referred to a death in a patient 22 years old, twenty hours after a tonsil operation. Otto M. Rorr

Ingersoll J. M.: Primary Sarcoma of the Trachea. *T Am Lary* vol 1: Atlantic City 1914, May. By Surg Gynec. & Obst.

In this case a man aged 32 had a persistent troublesome cough for several months and three very severe prolonged attacks of paroxysmal coughing, and in each attack the patient finally coughed up and expectorated what he called a polyp. Examination of the larynx showed it to be inflamed and on the left side of the trachea just below the first ring there was a pedunculated tumor. Operation was refused by the patient until later when the growth had tended and was operable.

Delaan of New York spoke of the hopelessness of the condition and voiced his belief that the hope of the future rested on some chemical treatment rather than on surgery.

Jackson of Pittsburgh spoke of the rarity of primary malignancy in the trachea and the hopelessness of the condition when it occurs on the posterior wall because of the abundance of lymphatics in this region. Otto M. Rorr

Jackson C.: Limitations of Bronchoscopy. *T Am Laryngol* vol 1: Atlantic City 1914, May. By Surg Gynec. & Obst.

The author believes that the limitations of bronchoscopy are reached in the inability to find a small foreign body far down and far out in the periphery of the lung rather than in a fall to remove it when found. The limitations in a particular case could not be said to have been reached until bronchoscopy had failed at the hands of at least two bronchoscopists of experience.

Hubbard of Toledo, referred to the non-support of the patient and his physician as establishing a limitation.

Ingersoll of Chicago thinks that the time for working on a patient should not exceed a half hour. Otto M. Rorr



**Coakley C G** The Surgical Treatment of Empty-  
ema of the Nasal Accessory Sinuses in Children  
under Fourteen Years of Age *T Am Laryngol Ass Atlantic City 1914 May*  
By Surg Gynec & Obst.

Cases requiring surgical treatment have either a swelling over the antrum or around the orbit.

The antral cases are almost always associated with an osteomyelitis of the superior maxilla and are operated through the canine fossa with a counter opening in the nose.

The orbital cases if mild are kept in bed with cold compresses and frequent instillation of a 1 per cent solution of cocaine and a 1/20,000 solution of adrenalin. The severer type requires operation without waiting for the development of a roentgenogram and is an ethmoid and sphenoid excision through the external route. A probe is passed into the frontal sinus and the diseased membrane must be removed lest there be recurrence. The wound should be left open. There is no consequent deformity.

**MOSHER** of Boston spoke of the development and size of the accessory sinuses in children and stated that from the third year there is an antrum large enough to permit of surgical treatment. The same is true of the ethmoid labyrinth from six years on ward and of the frontal from the eighth year. From the third year a surgical sphenoid may be expected.

**MAYER** of New York spoke of another class of cases between the two types as mentioned by Coakley and all were in the neighborhood of three to five years of age. They presented the following conditions: An opening or perforation directly under the eye about 1 inch in ectropion and foul smelling discharge. A probe dropped at the opening over the zygoma went into a cavity and turned toward the nose and was easily pushed into the nose.

**CASSELBERG** of Chicago spoke of a chronic type of case occurring in children from nine to fifteen years of age in which there were nasal polyps in the middle meatus, polypoid enlargement of the middle turbinate, and pus in thetrum and anterior ethmoid cells and sometimes in the posterior ethmoid cells. In these cases he removed the middle turbinate and the floor of the anterior ethmoid cells.

Otto M Rott

**Coffin L A** The General Considerations of Empty-ema of the Nasal Accessory Sinuses in Children under Fourteen Years of Age *T Am Laryngol Ass Atlantic City 1914 May*  
By Surg Gynec & Obst.

In utero and where a sinus is suspected there is a possibility of discharge which may be washed out or otherwise cleared if secretion if then negative pressure is applied to the nostrils and more pus mucus found we may be quite sure that it comes from some of the accessory sinuses. The author has found great satisfaction in treatment by negative pressure suction and the use of autogenous cecins.

Otto M Rott

**Wood G B** The Pathology of Acute Sinusitis of Children under Fourteen Years of Age *T Am Laryngol Ass Atlantic City 1914 May*  
By Surg Gynec & Obst.

The pathology of acute sinusitis is influenced by the severity of the infection and by the resistance of the patient and upon these two factors depend the degree of inflammation. The characteristic changes found in the mucosa in the mild cases are congestion and slight edema of the connective tissue; increase in the number of beaker cells in the epithelium and slight increase in the number of lymph cells in the superficial layers of the connective tissue. In the more severe cases the edema is increased, the congestion more severe and the extravasation of the red blood cells into the connective tissue stroma becomes so intense that the condition resembles a subepithelial hemorrhage. The leucocytic infiltration is marked but still only involves the subepithelial layers of the connective tissue. In only the very severe cases does the whole connective-tissue layer become infiltrated so that the periosteum is attacked. Infiltration of the periosteum is very apt to be followed by bone changes. In diphtheria sinus involvement is very frequent though the majority belong to the mild catarrhal group. In scarlet fever sinusitis is less frequent but more severe so that bone involvement is quite common. Other infectious diseases show nothing peculiar or characteristic. Otto M Rott

**Ingala E F** Nasopharyngeal Myxosarcoma—  
Several Operations and Finally Spontaneous  
Recovery under Observation for Twenty seven  
Years *T Am Laryngol Ass Atlantic City 1914 May*  
By Surg Gynec & Obst.

The author reported a case first seen in 1883 when the patient was thirteen years of age. At that time a growth filled the nasopharynx and right nares. With difficulty the mass was removed at several sittings but it continued to grow causing great deformity of the right cheek and destroying vision of the right eye. Three or four years afterward it atrophied and fifteen years later there was no remnant of tumor left but the deformity and loss of vision remained. The author refers to the well known tendency exhibited by fibrous growths in this locality of retrogression and final disappearance between the nineteenth and twenty-third years of the patient's life.

Otto M Rott

**Loeb H W** The Influence of the Nose on Eye Affections, as Evidenced by a Case of Bilateral Blindness and On of Unilateral Scintillating Scotoma Cured by Operation on the Ethmoid Cells. *T Am Laryngol Ass Atlantic City 1914 May*  
By Surg Gynec & Obst.

The author reports two cases illustrating the title of his paper and states that these confirm his investigations on the anatomy of this region to the effect that the ordinary circumstances of the optic nerve are in close relation with the ethmoid labyrinth only to the posterior-external angle of the

last posterior cell Where this relation exists there is only the slightest possibility of any danger to the optic nerve in suppuration confined to the ethmoid cells But when the last posterior ethmoid cell replaces the sphenoid the optic nerve runs close to and along the external wall of this ethmoid cell and the vulnerability of the nerve is correspondingly heightened in view of the greatly increased portion exposed.

Otto M Rorr

Shurly B R The Relation of the Tonsil to Thyroid Disease. *T Am Lary gol Ass Atlantic City* 914 May By Surg Gynec. & Obst

It is obvious that the physiology of the thyroid and other ductless glands is profoundly affected by toxic disturbances in general and particularly those that enter by the lymphoid ring. The author has noted beneficial results after a tonsillectomy in patients who had incipient Graves disease thus adding another definite indication to surgical procedure In all cases of thyroidism an examination of the nose throat and ears is essential

SLINGER of St. Louis, spoke of the shrinkage of a goster following treatment of the lingual tonsil by means of application of silver and salicylic acid in alcohol in saturated solution

WOOD of Philadelphia, reported the case of a nurse who had recurring tonsillitis and exophthalmic goiter and hyperthyroidism following tonsillitis The removal of her tonsils stopped the attacks and her goiter began to go down and the exophthalmos disappeared

SHAMBAUGH of Chicago, spoke of this relation existing even when tonsils were apparently in a healthy condition but which after removal showed a pus pocket at the base

Otto M Rorr

Mayer E. Primary Lupus of the Larynx. *T Am Lary gol Ass Atlantic City* 914 May By Surg Gynec. & Obst

The author reported 2 cases of primary lupus of the larynx in the later stage of the disease This brings the total number of cases of primary lupus of the larynx recorded in the literature to 35 Lupus of the larynx is a chronic disease with but the slightest symptoms is often accidentally discovered and the prognosis to life is relatively good

CLARK, of Boston reported a case of lupus of the larynx in a young woman who previously had developed lupus in the angle of the mouth on the cheek and on the left side of the posterior wall of the pharynx On examining the larynx the doctor found the piglets swollen pale and nodular and the same condition extended down to the aryepiglottic fold and enlargement of the arytenoids

CASSELBERRY of Chicago said that he believed he would be called the first case reported by Mayer one of tuberculosis of the lary

BIRRETT of Montreal spoke of 2 cases treated

by the X ray by means of a lead tube dropped into the pharynx and down to the larynx Both cases recovered He also referred to two cases of primary lupus of the nose which made complete recoveries under radium

Otto M Rorr

Shambaugh G L: Laryngocele Ventricularis. *Tr Am Lary gol Ass Atlantic City* 914 May By Surg Gynec. & Obst

Laryngocele ventricularis applies to a cystic dilatation of the ventricle of Morgagni a pathological condition which results from forcible distention with air of the ventricle usually as the result of coughing spells or the use of wind instruments Cases occur where there is only an intralaryngeal distention others with only an extralaryngeal distention where the cyst has broken through the thyrohyoid membrane producing a swelling in the neck and other cases where there exists both an intra and extralaryngeal distention The author's case was an intralaryngeal swelling which became infected An external operation was performed, and the cyst in the neck removed down to the opening of the thyrohyoid membrane The intra laryngeal condition was operated upon by slitting the cyst from below upwards

INGALLS, of Chic go had a case without infection, which he treated by aspirating the cyst and then injecting equal parts of 95 per cent carbolic acid and glycerine There was a good result at the time but the cyst reappeared later

Otto M Rorr

Hopkins F L: The Use of Radium in Papilloma of the Larynx in Adults. *T Am Lary gol Ass Atlantic City* 914 May

B Surg Gynec. & Obst

Some positive cures are reported More than a single application may be necessary and burns from too long exposure with consequent adhesions and contractions are possible Caution is advised as to the length of exposure when a powerful tube is used

SWAIN of New Haven spoke of the aid of suspension laryngoscopy in this connection

Otto M Rorr

Casselberry W E. Recurrent Lymphomas of the Laryngopharynx Presence of Streptococcus Hemolyticus in the Growths Excised and in an Associated Sphenoidal Discharge Autogenus Vaccination Arrest of Recurrence Recovery. *T Am Lary gol Ass Atlantic City* 914 May By Surg Gynec. & Obst

The author spoke of the causal relationship between the discharge from nasal sinus disease and tonsillar and other lymphoid enlargement and reported a case exhibiting this association The term lymphoma is used synonymously with infectious lymphoid swelling

Otto M Rorr

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NOTE—The bold face figures brackets to the right of a reference indicate the page of the issue on which an abstract of the article referred to may be found

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## SURGERY OF THE ABDOMEN

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# INTERNATIONAL ABSTRACT OF SURGERY

OCTOBER 1914

## MONTHLY COLLECTIVE REVIEW

### THE ABDERHALDEN (SERODIAGNOSIS) TEST FOR PREGNANCY

#### A RÉSUMÉ OF THE LITERATURE

By W. A. NEWMAN DORLAND M. D. F. A. C. S. CHICAGO

Professor of Gynecology in the Post-Graduate Medical School, Professor of Obstetrics in the Medical Department of Loyola University

**I**n 1912 Emil Abderhalden professor of biologic chemistry in Halle Germany formulated and published a new idea in physiology which if it stands the test of time as it appears to be doing will go down in the history of medicine as epoch making. It has been termed a laboratory diagnostic test for pregnancy especially valuable during the first four months of gestation but in its ramifications and enlargements it appears to be far more than this becoming in reality an almost mathematically accurate method of diagnosis of many organic diseases as well. Since the appearance of Abderhalden's first paper there have been a few dissenting voices, notably Engelhorn and Michaelis and Von Lagermarch in Germany and Heaney and Davis and Williams and Pearce in this country but the consensus of opinion among those who have studied and tested the method in over 3,000 cases is corroboratory. The possibility of errors in technique must be borne in mind in every negative case. In all his experience Abderhalden has never obtained a negative result with serum from pregnant women or animals. Moreover an interesting side-proof was obtained when placental material injected subcutaneously or intravenously into males gave positive findings.

In studying the method Abderhalden gives, in his various contributions, the following axioms:

1. Positive findings show that the serum comes from a person with a placenta but this does not show whether there is a living fetus present or not.

2. If the reaction is positive and there has been recent uterine hæmorrhage even in the absence of other signs of pregnancy an abortion is suggested.

3. The reaction generally grows weaker toward the end of pregnancy and increases again during the puerperium.

4. The rotatory action of the serum of the fetus sometimes differs from that of the mother's serum. This confirms the biologic independence of the maternal and foetal blood.

5. The ferment is present in the blood from the sixth week after the last menstruation until the end of the third week post partum.

6. The ferment is present in ectopic gestation as well as in normal pregnancy.

7. Experiments on animals show that the reaction may be obtained within twenty-four hours after implantation of an ovum.

#### THE PHYSIOLOGIC BASIS OF ABDERHALDEN'S METHOD

Abderhalden's biologic test is based upon the principle that when a foreign substance is introduced into the blood a specific ferment is elaborated which is capable of decomposing this material. These protective ferments (*Abwehrfermente*) appear whether the foreign bodies gain entrance to the blood current autogenously or by parenteral (subcutaneous, intravenous, or intraperitoneal) injection. They are strongly proteolytic causing the proteolysis by hydrolytic cleavage and work independently of the similar

protective action of the leucocytes. Moreover they are specific in their action in that they digest or break up protein substances of the same nature only as those which are introduced into the blood current and not any protein in definitely. Ferments of this nature include the agglutinins, anaphylactogens, hemolysins, precipitins, and other bodies of modern physiology.

The products of this protein digestion are primarily peptones and ultimately amino-acids, both of which are soluble and diffusible and quickly appear in the dialysate of a diffusion-cell where they can be recognized by testing with ninhydrin (tri-keto-hydrin dehydrate) or by the biuret reaction—both constituting the dialysis method or by subjecting the fluid surrounding the diffusion cell to the optic test. In which the rotatory action of the fluid is noted before and after diffusion has occurred.

The specific ferment appearing in the blood of pregnant women results from the entrance into the blood-current of decidual chorionic and syncytial cells from the placenta and this ferment possesses the property of digesting placental tissue. In order to carry out the test two substances are necessary namely a fresh or recently extracted placenta and the serum from the woman in whom a pregnancy is suspected.

#### PREPARATION OF THE PLACENTAL TISSUE

A fresh placenta is carefully washed both externally and by flushing through its vessel. This is done in order to remove all maternal and foetal blood which will necessarily contain the protective ferment. The placenta is then cut into small pieces and boiled. The filtrate from this process contains the chorionic proteids, and it is this filtrate which is placed in the diffusion cell with the suspected serum.

#### THE BIOLOGIC TEST OR METHOD OF DIALYZATION

Boil one grain of coagulated placental tissue in ten times its volume of water, pour off the water and repeat the process until the addition of a few drops of a ninhydrin solution or of a biuret solution gives no reaction. Abderhalden recommends the ninhydrin test as more exact and as permitting finer differentiation in color than the biuret test. Now place the placental tissue in a diffusion cell provided with a membrane which allows peptone to pass but retains unsplit protein and to it add 2 or 3 ccm. of blood-serum from the patient whose blood is to be tested. Surround the diffusion-cell with 20 ccm. of distilled water. Cover the liquid in the cell and that in the surrounding cell (the dialysate) with a layer of

toluol place in an incubator for twelve to sixteen hours at a temperature of 98.6 F (37° C.). At the expiration of this time place 10 ccm. of the dialysate in a test tube add 0.2 ccm. of a 1 per cent aqueous solution of ninhydrin and boil for one minute. If protein derivatives are present the mixture will turn a characteristic violet blue color and it may be assumed that the serum comes from a pregnant woman. If no color appears it is to be assumed that the serum is from a non pregnant woman.

The biuret reaction gives a pink color. If the digestive process is carried too far the distilled water around the diffusion-cell will fail to give the biuret reaction because all peptone has been reduced to amino-acids. It will continue however even at this stage, to give the ninhydrin reaction.

#### THE OPTIC METHOD

Place 1 ccm. of a 10 per cent solution of normal placental tissue in physiological salt solution and 2 ccm. of the serum to be tested in a small polarization tube. Read the initial rotation then place the tube in an incubator and test the change of rotation at various intervals up to thirty six hours. Serum from pregnant women will give a change in rotation from 0.05 to 0.2 degree while the maximum change with serum from non pregnant women never exceeds 0.03 degree. Abderhalden has devised a special polarimeter for this test.

#### ABDERHALDEN'S TEST IN GENERAL PATHOLOGY

That it is an accurate means of early diagnosis of pregnancy is not the only claim for this method—the underlying principle is much more far reaching than this. Any abnormal change developing in any part of the body reacts upon the blood current and produces in it some anti body or protective ferment to counteract the pathologic alterations or the toxins produced thereby. Thus carcinoma and sarcoma in their varying aspects generate by their presence harmful ferments capable of digesting the peculiar cancerous or sarcomatous growth producing them. The early appearance of these antibodies or ferments occurring as they probably do within seven or eight weeks of the appearance of the neoplasm renders an early diagnosis of malignancy possible before metastasis or general body involvement has occurred and thereby strongly enhances the possibility of total eradication of the growth by surgical measures promptly instituted.

Webster has lucidly stated the probable underlying law in the application of Abderhalden's

test to general pathology as follows. The proteins of the various organs are chemically different that is the component amino acids of which the protein molecule is composed are different in type and amount in the various specific tissue proteins. It is reasonable to suppose therefore that the ferments in the serum of cancer patients might digest the protein of certain cancerous tissue and not of others. For this reason one must use as the substrat (substance to be hydrolyzed) in the Abderhalden test for cancer many different cancerous tissues in order to be sure of his test. This would seem to indicate that the pathologist must keep on hand in his laboratory many stock substances representing the various tumors and pathologic tissues found in the human body wherewith to test the serum of the patient whose pathologic condition is to be diagnosed by the dialysis method.

#### SERODIAGNOSIS OF INFECTIOUS DISEASE

Ernst Voelkel has extended the principle underlying the Abderhalden test to the diagnosis of bacterial infections. He prepared substrats of typhoid diphtheria and anthrax bacilli from agar cultures. He obtained trypanosome proteid from the blood of an infected guinea pig by means of centrifugation. He also carried out experiments with the spirochete using as a control horse-serum since he was unable to separate the organisms from their culture media. His results with the typhoid bacillus were very favorable also with serum from human beings infected with syphilis but in the case of all other bacilli the experiments did not result favorably. In all syphilitic and parasymphilitic disorders Wegener found that the serum caused cleavage of brain substance but not that of other organs. Frank and Rosenthal found that no relationship could be traced between the blood ferments and immune bodies.

#### ABDERHALDEN'S TEST IN PSYCHIATRY

As Simon has stated a natural corollary of the biologic test of pregnancy was an experimental investigation of the psychiatric problem of the long-suspected connection between certain mental diseases and the functional activity namely derangement of the sex glands. Degenerative processes in the nervous tissue of the brain and of the spinal cord are now believed by Fauer Simon, Beyer, Wegener and other observers to throw into the blood stream cells or other foreign substances which excite the development of a specific ferment capable of decomposing the proteins of the brain and cord. In corroboration of

this belief it is well known that in dementia præcox the tissues of the genital glands are more or less affected and as Webster has stated. We find the serum of patients with dementia præcox hydrolyzing testicular tissue if the patient be a male and ovarian tissue if the subject be a female much more markedly than it breaks up any other tissue. In epilepsy cortical tissue is especially acted upon [in those cases in which dementia is present] while testicular and ovarian tissues are not at all affected. It is interesting to note that these ferments are so specific that the ferment of one sex will not affect the glands of another sex that is the serum of a woman will not digest testicular tissue nor will that of a man digest ovarian tissue. Experiment has also shown that the organs of animals cannot be used in this test but only those removed from a cadaver not later than from six to twenty four hours after death.

The following precautions have been suggested

- 1 The organs should be taken from the cadaver of a patient who has not died after a long agony and has not suffered from an infection or high fever shortly before death.

- 2 The organs should be removed with aseptic precautions.

- 3 Organs containing much fat are not well suited to the test.

- 4 After having been cut up, boiled and tested until free from substances reacting with ninhydrin the organs should be preserved in the water in which they have been boiled between a layer of chloroform and a layer of toluene.

- 5 A control test should be made with a piece of the tissue and normal serum and also a test should be made of the serum alone.

In maniacal depressive insanity proteolytic ferments could not be demonstrated in the serum by the various experimenters thus indicating that the test may serve as an aid in differential diagnosis.

Webster believes that as soon as the proper substrats are established Abderhalden's test should be capable of almost exact diagnosis in the difficult field of psychiatry whereby medico-legal questions would be much more amenable to solution.

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No 1 is for measuring the lateral motion at the ankle joint

No 2 is for measuring the flexion and extension of the foot and also the position of the foot with regard to the leg anteroposteriorly

No 3 is for measuring the angulation of the knee elbow and wrist and the carrying angle at the elbow

No 4 is for measuring the circular movement of the radius

JAMES O WALLACE

Thompson H B: A Useful Splint for Fracture of the Upper End of the Humerus *Yorkwest Med* 914 1 64 By Surg Gynec & Obst

The author describes a figure-4 splint which he has used in a number of fractures of the humerus near the shoulder. He mentions the fact that Scudder has described it but as he has not seen it used by other physicians he calls attention to the method. In most fractures of the upper end of the humerus, the small upper fragment is pulled out ward and forward and to get good approximation the arm must be held in abduction with the elbow forward the abduction and forward position of the elbow can be changed to any desired angle. The sides of the enclosed part of the figure-4 need not be very long— to 4 inches for a child up to inches

for an adult. It is better to make the splint too small and pad it with cotton in the axilla. It is held in place by adhesive strips half way around the body at the nipple and the umbilicus, also around the arm and forearm. The whole is immobilized by a bandage through a splint around the arm and forearm, then around the body. An X ray is shown of a case supposed to have been reduced with the arm at the side of the body but in reality the bone was not approximated at all. It was then put up with the figure 4 splint and an X ray taken which showed the fragments in apposition.

C A STONE

Lewisohn R.: A New Oesophagoscope *A n Ost Rh: d u Laryngol* 1914 xxiv 5

By Surg Gynec & Obst

The author describes a new oesophagoscope which is a complicated rectangular instrument consisting of a horizontal part which lies in the mouth and a telescopic portion consisting of six tubes which are released by means of a long spring and supplied with a series of lenses and mirrors for the purpose of light reflection by which the view obtained is inverted but not reversed. No forceps have been devised to use through the tube.

CLARE J PATTERSON

## SURGERY OF THE HEAD AND NECK

### NECK

Thelsen C F: Acute Thyroiditis as a Complication of Acute Tonsillitis. *A Ost R&M* 914 1 64 By Surg Gynec & Obst

The author reports the histories of seven cases in which acute non-suppurative thyroiditis developed in a previously healthy gland of normal size either during or directly following an attack of tonsillitis.

The acute condition subsided under treatment in about ten days, but two cases after repeated acute attacks developed a mild gland goiter and two cases developed hyperthyroidism.

A study of the literature shows that simple thyroiditis which runs its course without suppuration, is a rare disease and a primary acute inflammation of the thyroid gland is so rare that it almost never seen. Only thirteen cases having been reported.

CLARE J PATTERSON

Hirschfeld L and Klinger R: Studies of Endemic Goiter (Studien über den endemischen Kropf) *München med Wochenschr* 914, 1 46 By Journal de Chirurgie

The authors' experiments on rats confirmed the statistical results published heretofore. The latter experiments like the former indicate a transmission of the virus by direct contact rather than through the water.

KOCHER

Broeckert, J.: A Case of Suffocating Goiter. *Study of a Series of Fifty Operations for Goiter* (À propos d'un cas de goitre suffocant considérations sur une série de 5 extirpations de goitre) *A Soc Belg de Med Brux* 914, xxiv, By Journal de Chirurgie

The author presented a young man of 20 who had been operated on for a goiter that caused the most extreme dyspnea. Besides the enlargement of the lateral lobes there was retrosternal prolongation the size of a mandarin orange that compressed the trachea. This prolongation and the right lobe were enucleated under local anesthesia. He left the hospital at the end of two weeks in excellent condition.

The author has operated on 50 cases of goiter only 4 of them being in men. Seven of them were true primary exophthalmic goiter with the classical symptoms besides some of the patients showed severe general symptoms. All recovered and the pulse fell to 80 or 90. In 4 there was absolute and complete recovery and on 1 of the operations was seven years ago the three others resumed work and were practically cured but a certain degree of exophthalmos persisted and some slight hyperthyroid symptoms. In 16 there were no recurrences.

Such results—50 thyroidectomies, 7 of them for exophthalmic goiter without a single death—also thorough technique and judicious selection of cases. Cases that show profound cachexia myocardia,

albuminuria, or diffuse oedema should not be operated on. But sometimes even in severe cases of Basedow's disease the author follows Kocher's plan of performing several successive operations, often with unhopcd for results. Generally he operates only after the failure of medical treatment but manifestly it would be useless to attempt medical treatment in cases of cystic calcified or osscous goiter. Operation should be performed at once when a simple goiter begins to show signs of Basedow's disease and also when there are signs of compression. He prefers local anaesthesia except in children and nervous patients. He thinks sub

capsular enucleation the quickest and least dangerous method of operation. When it is necessary to remove the diseased lobe with its capsule as in exophthalmic goiter he takes care to spare the posterior part of the capsule thereby avoiding the recurrent laryngeal and the parathyroids. The greatest care should be taken to avoid venous hemorrhage the veins must be ligated carefully not merely crushed. As for the choice of operation in exophthalmic goiter he prefers hemithyroidectomy combined with resection of the upper half or exceptionally with ligation of the upper pedicle of the opposite lobe. J. Duromet

## SURGERY OF THE CHEST

### CHEST WALL AND BREAST

Fort R. E. Total Excision of Clavicle and First Rib for Malignant Disease. *S. & G. J.* Oct 1914. No 596. By Surg. Gynec. & Obst.

The patient a boy aged eleven with negative family history had a tumor of eight months duration. Three months after another surgeon had chiseled away part of the tumor it was submitted to Dr. Litterer pathologist of Vanderbilt University who reported giant-cell osteosarcoma. The tumor rapidly reproduced itself and when seen on July 3, 1913 it was the size of an English walnut smooth hard and firmly attached to the inner third of the clavicle and first rib. A T shaped incision was made from the sternum along the lower border of the clavicle to the coracoid process of the scapula and from the upper portion of the sternum to the upper border of the second rib and the clavicle disarticulated from the sternum and first rib. Excision was accomplished by working from within outward. The same method was followed in the excision of the rib which was by far the most difficult part of the procedure. A padded retractor was used to hold open the chest. Considerable difficulty was encountered in disarticulating the rib from its cartilaginous attachment. This was accomplished by using blunt scissors into the articulation half of the sternum was removed from its upper portion to the second rib. The author regards protection of the mediastinum and pleura as one of the most important steps practically all of the immediate mortality being due to infection.

The wound was closed and a cigarette drain inserted. The chest was ligated during the operation and there was no injury to the mediastinum or pleura. Recovery was uninterrupted.

Zeeas, D. G. The Question of Pleural Reflexes (Zur Frage der pleurogenen Reflexe). *Zentralbl. f. Chir.* 1914. No 37.

By Zentralbl. f. d. ges. Chir. u. Gynäkol.

There are two diametrically opposite theories to explain the nervous symptom observed after opera-

tions on the pleura—that of pleural reflexes and that of air embolism in the arteries.

The first theory is supported by the fact that where an injection of morphine is given before a puncture of the pleura there is no attack of general spasms with loss of consciousness and that if the spasms appear they immediately disappear after an injection of morphine. Breuer has tried to show from his cases and autopsies that such cases are caused by emboli originating in the pulmonary veins.

Zeeas does not believe that Breuer's results disprove the reflex theory but believes they only show that nervous disturbances appear that may be due to arterial air emboli. He assumes that the nervous disturbances may be of different origins, caused by pleural reflexes as well as by arterial emboli. Clinical and experimental results seem to indicate that the reflex effect is the more frequent from which the practical conclusion is drawn that every operation on the pleura should be preceded by an injection of morphine to allay nervous irritability. Kohn

### TRACHEA AND LUNGS

Lilienthal, H. Pulmonary Abscess and Bronchiectasis. *A. Surg. Phila.* 1914. No 855. By Surg. Gynec. & Obst.

The author bases his conclusions on the study of fourteen cases of non-tuberculous suppuration of the lung. Fourteen operations were performed on eleven patients. One patient was not operated on. Two patients were still under treatment. There were four deaths and three actual cures. The conclusions are as follows:

The differential diagnosis of true lung abscess and suppurative bronchiectasis is important.

1. Radiographic study of each case is essential.
2. Bronchoscopic examination is a valuable procedure and should not be omitted.
3. Drainage of a lung abscess by thoracotomy is unlikely to result in cure.
4. Drainage of large infected bronchiectases may be followed by improvement but complete recovery is unlikely.





rhages which examination showed were due to a jejunal ulcer. He has not yet been operated on again.

**LEACH** in 1908 saw an ulcer of the opening after posterior gastro-entrostomy with a button. On reoperation there was an enormous plaque of inflammation infiltrating the mesocolon and retracting the opening. Patient recovered after jejunojejunostomy. The next year there was another recurrence and finally death. On autopsy the gastrojejunal ulcer was healed but there was a large recent ulcer of the lesser curvature. There are therefore recurrences in spite of everything. These ulcers seem to be trophic in origin and in such cases Leriche advises operation by dorsal root-section.

**DESQUOTTES** recently operated on a patient who had a gastro-enteroanastomosis four years previously with a Jaboulay button. He had suffered a great deal. Desquottes found the anastomosis reduced to a thread but a stylet could be passed from the stomach to the intestine. He cut this anastomotic band and made a new anastomosis.

**BERARD** reoperated on a patient on whom Delore had performed gastro-enterostomy with a button. He found the opening had completely closed. He has since given up the button and now makes his anastomoses with suture and clamps and has never had a peptic ulcer.

**VALLANBELLE** states that anastomoses with the button may retract spontaneously. He has always used suture and has never had a peptic ulcer or secondary ulceration.

**Mallory W. J.** Gastric Hypertony and Gastro-Enterostomy. *J. Am. Med. Assn.* 1914, 14, 1483. By Surg. Gynec. & Obst.

The author attempts to explain these cases in which there is a return of vomiting pain and other gastric symptoms following the operation of gastroenterostomy by what is called gastric hypertony or stimulative vagus neurosis.

The stomach receives its nerve supply from (1) the vagus which conveys its motor impulses (2) the sympathetic which is inhibitory and (3) the plexuses of Auerbach and Meissner which are both motor and inhibitory.

**Eppinger** and **Hesse** are quoted as describing a condition of excessive vagus stimulation as an increase of the motor and sensory functions of the stomach coupled with other vagus phenomena. X-ray reveals a small stomach tightly contracted with occasional antiperistaltic waves.

In this condition while at operation the stomach is usually relaxed yet as soon as it begins to receive its usual stimuli there follows a spastic condition that contracts the new stomach and soon gives rise to a return of the old symptoms. X-ray examination during an attack shows a contracted stomach with no patency to the new stomach.

The author recommends a close examination in all gastric ulcer cases for the signs of gastric motility. They are (1) bradycardia (2) disturbance of respiratory rhythm (3) bronchial asthma (4)

dermographism (5) urticaria, (6) "head zones," (7) low blood pressure, (8) spastic constipation alternating with diarrhoea. In cases showing these signs a careful medicinal and hygienic line of treatment both before and after operation, should be instituted.

**PHILLIPS M. CHASE.**

**Hartmann II:** The Function of the Gastro-Enterostomy Opening, in Cases of Permeable Pylorus. *A. Surg. J.* 1914, 14, 832.

By Surg. Gynec. & Obst.

Two problems are discussed, and the results of experiments performed by the author on dogs, together with X-ray findings following gastro-enterostomy are given. The first problem to be discussed is, "Does the anastomotic mouth obliterate in the presence of a patulous pylorus?" Although the view that it does obliterate is accepted by Kelling, Tupper, Jaboulay and others, Hartmann disagrees being unwilling to admit that the anastomosis thoroughly lined by mucous membrane and free from scar tissue should become obliterated merely because of its non-use.

Forty-five cases in which the "mouth" became obliterated are mentioned. He concludes that obliteration results sometimes from the cicatrization of a peptic ulcer which has developed in the mouth. Obliteration of the anastomosis is exceptional in cases not operated on with a button or by the Y method.

On the other hand the integrity of the anastomosis has been anatomically ascertained in cases of pylorus, to be functionless by Heuck after 3 months, Busch after 6 years, by the author after 5 years.

The second problem is, "Are the gastro-intestinal anastomoses functionally useless in cases of permeable pylorus?" The generally accepted theory is that if it remains patent it is useless.

His facts do not agree absolutely with these conclusions. Legueu, Delbet, Leca, Gray, Peirez, Hartel and Hesse have observed the gastric contents pass through the pylorus and through the gastrointestinal mouth.

Hartmann's experiments show that evacuation is principally by the anastomosis if it is situated on the pyloric antrum and through the pylorus if it is situated on the fundus of the stomach. The different modes of evacuation find an explanation in the difference in the force of muscular contractions in different parts of the stomach. Pressure is very weak near the fundus and very strong near the pylorus.

Radiologic observations are in accord with the author's experimental findings that the gastro-intestinal mouth may work here there is a patulous pylorus.

**Downes, W. A.:** Pyloric Obstruction in Infants. A Report of Twenty-Two Personal Cases with Operation. *J. Am. Med. Assn.* 1914, 14, 200. By Surg. Gynec. & Obst.

The author reports 22 cases of infants in which surgical treat-

out There were eight deaths three of which were not due to the operation

From a study of these cases the author submits the following conclusions

1 Hypertrophic pyloric stenosis is congenital to the extent that there is an increase in the thickness of the circular muscle-fibers at the pylorus. The presence of this thickened muscle fiber reduces the lumen of the pylorus and therefore the stomach in order to empty itself contracts more forcibly than normal. This abnormal contraction soon causes the mucous membrane to become thickened and edematous and assume a more or less spiral arrangement as it passes through the narrow pyloric channel of from  $\frac{1}{2}$  to  $\frac{3}{4}$  inch. The result is a valvular action which gradually produces complete closure of the pylorus. The question as to whether or not the pylorus will admit a probe or catheter at operation or necropsy is of little consequence when weighed against the clinical evidence of complete obstruction.

2 That there is sufficient time between the onset of symptoms and the appearance of the signs of complete obstruction for careful observation and the carrying out of any medical measure likely to prove of benefit there can be no doubt provided

of course that the early symptoms have been properly interpreted. The farther however that the condition may have existed longer than has been suspected and that the fatality of the baby is not so good as appearances would signify was the author to feel that operation is indicated in every case of hypertrophic stenosis as soon as the diagnosis is made. Should depression rapidly evolve of shock be present immediate operation is demanded.

The babies coming to operation in good condition suffer little or no shock. The convalescence is straightforward and they are usually restored to normal health.

Holt L. E. Medical Versus Surgical Treatment of Pyloric Stenosis in Infancy. *J. Am. Med. Assn.* 9 4 Jan 30 4. By Surg. Gynec. & Obst.

This paper is based on the study of 7 cases of pyloric obstruction in infancy. The symptoms, diagnosis, and treatment are discussed. The most characteristic symptom is projectile vomiting usually occurring when the age of the child is five to seven weeks. The first tentative attempt at feeding the first few days after birth is not often due to pyloric stenosis. The diagnosis is usually made from the symptomatology. Besides visible gastric peristalsis the most valuable information can be obtained from measuring the stomach contents a few hours after feeding. A known amount of non-caloric food. Such information is more valuable than that gained from roentgen study after a bismuth meal.

The author believes the generally accepted classification of these cases with the hypertrophic and spastic types is unwarranted and misleading in that probably all have similar pathology. He thinks it better to divide them into mild and severe.

The advantages and disadvantage of following either the medical or surgical methods of treatment are discussed in detail. The author believes that the pathological condition responsible for the symptoms is of such a nature that it disappears in time and that the surgical treatment should be carried out in these cases in which it seems reasonable that the mechanical treatment will not serve to keep the patient in fair nutrition until the condition is relieved. The indications for operation are (1) no diminution in the vomiting or gastric peristalsis by stomach washing and diet (2) a steady loss of weight of one to two ounces per day (3) marked gastric retention (4) absence of fecal stools.

The author minimizes the importance of a palpable tumor both as a diagnostic sign and as an indication for operation. BARNETT BROOK.

Quénou E. and Constantinelli H.: Indications for Resection of the Intestine in the Radical Treatment of Certain Hernias (Des indications de la résection intestinale dans la cure radicale de certaines hernies). *Rev. d'Chir. et de Gyn.* 4 4 1934. By Journal de Chirurgie.

The authors discuss resection of the intestine in the radical treatment of certain hernias when there are no complication and especially no strangulation. Hernias containing new growths and tubercular foci are rare and therefore of little interest. Adherent and irreducible hernias constitute the great majority of the cases in which enterectomy is indicated. The nature of the adhesions, the structural changes and injuries of the intestine in the course of freeing them may be indications for an enterectomy. Hernia was first practiced by Julliard and is still considered a serious operation.

The authors report cases—three of them their own—with only one death. They express a scepticism as to the frequency of adhesions which would be rupturing were it not for the fact that the adhesions in the three cases were inflammatory in nature and difficult to treat in any other way. In contrast with the results furnished by enterectomy they cite the accidents observed in certain conservative operations such as testicular occlusion and a tubercular hernia as the severity of the operation depends on the length of the intestine which must sometimes be resected. As reduction is made less the danger of cardio-pulmonary accident or crisis of occlusion about to form peritonitis the rule generally followed. J. OAKENSHAW.

Bartlett W. A Clamp Introduced to Facilitate the Suture-Anastomosis of Hollow Viscera. *J. Surg. & Obst.* 9 4 Jan 1935. By Surg. Gynec. & Obst.

The author holds that in stomach and intestinal surgery a small ligature anastomosis operation requires the aid of an instrument to hold the viscus fixed in position to prevent escape of the contents and to produce hemostasis.





The illness started while the child was out walking. It became peculiarly irritable and later vomited its supper. Two days later it was found to be suffering with an acute abdominal pain, some distention and was vomiting. The temperature was 100 and the pulse from 110 to 130. The next day the condition was about the same except that there was a great increase in the abdominal tenderness and pain but there was no sign of localization of the inflammation. The next day the child was found in a state of collapse with almost persistent vomiting of bile and dark liquid of a fecal nature. There was more abdominal distention, great distention. Intestinal obstruction was the diagnosis then made and the child was operated upon.

The peritoneum was found to be severely inflamed, very much enlarged and perforated. The general peritonitis was pronounced. The child improved following the operation but the obstruction was not entirely relieved. It operated upon again and an incision was made in the abdominal wall. It was found that there was a large when it was found of general peritonitis. While appendicitis was considered the case it was not considered sufficient import.

The author then takes up the frequency of symptoms in this group of cases. It is a general finding and is not limited to the children of this age group.

The character of the lesions of the peritoneum is also of great importance. It will be noted that the lesions are of the following types:

Appendicitis, ulcer, perforation, and prob-

ably morbid conditions of the peritoneum.

The following are the main findings in the infantile group:

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there is no involvement of the mucous membrane but on account of the narrowing of the gut the irritation caused by the passage of feces may produce ulceration.

The symptoms are slight constipation and diarrhoea sometimes alternating. Later the symptoms are those of gradually increasing intestinal obstruction. The differential diagnosis is between carcinoma, syphilis and chronic appendicitis with adhesions.

The treatment is purely surgical. If possible the entire growth should be removed but failure in this is a serious operation should be performed to relieve the obstruction.

Two cases are reported with successful operation.

Miscellaneous L. J. The Pathologic Significance of Colon and Intestinal Surgery. *Ann. Surg. & Obst.* 1914, 19, 137-144.

Studies with the microscope and the microscope have shown that the true prolapse of the sigmoid colon into the rectum is not an uncommon condition. The author writes here concerning the content of the sigmoid attaching the mesentery of the sigmoid to the rectum portion of the out of the mesentery of the sigmoid.

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Frankenburger J. M. Hyperplastic Tuberculosis of the Colon. *Ann. Surg. & Obst.* 1914, 19, 137-144.

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median line. Fifth it takes the colostomy opening away from the neighborhood of the iliac crests, and allows better fitting of retention apparatus and colostomy shields. Sixth control of a median colostomy is as satisfactory as the lateral.

The author has found no difficulty in securing colostomy control by using a small rubber catheter in the mesenteric opening beneath the spur and encircling the upper limb of the colostomy with this catheter drawing it just snug enough that the mucous surfaces are in apposition. The catheter is held in this position by a seraphine snap and is released by the patient when he wishes to defecate or expel flatus.

Martin C F. Retrorectal Infections. *T Am Ficol Soc* Atlantic City, 1914, June.  
By Surg Gynec & Obst

Martin reviews the histories of sixty-seven cases. In addition to the infection of the retrorectal space many of the cases also had involved the pelvirectal and ischioirectal spaces. Some of the more chronic cases were complicated with stricture of the rectum and multiple fistulae.

Eighty five per cent of the infections occurred in males. External traumatism was not a factor in this series of cases. The author holds that most of these infections originate from internal traumatism associated with some condition which lowers the resistance of the individual to pyogenic infection.

Pulmonary tuberculosis appears to be the most constant factor in lowering the resistance. Twenty one per cent died from tuberculosis at varying periods either after examination or operation.

Forty three per cent of the cases are not dead as having pulmonary tuberculosis.

Of the 55 cases operated upon 33 were cured. These present 60 per cent of the operative cases or nearly 50 per cent of the total number examined.

In nearly half of the cases the origin of abscesses had opened posteriorly either between the sphincters or at the anorectal line. Pain was not a prominent symptom.

The methods of incision applicable to the various complicating conditions are briefly outlined. The author lays great stress upon the seriousness of these infections and upon the necessity of the prolonged watchful after treatment.

While the prognosis is both complete recovery of the local condition and the general health as well as to the preservation of the sphincter control should be guarded careful after treatment and prolonged observation will result in saving large proportion of these really serious cases.

Thorbecke W. Familial Occurrence of Intestinal Polyps (Über das familiäre Auftreten von Darm-polypen). *Deutsche Zeitschrift für Chirurgie* 94, 1913, 553. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author reports three cases in a child, its father and the father's brother. In about 50 per

cent of the cases of polyps there is carcinomatous degeneration. The proportion of polyposis in men and women is 100 to 67. 82 per cent occur before age 40, the rest after that age. Polyposis with carcinoma is twice as frequent in men as in women. The large intestine is most frequently affected, especially the rectum. The disease generally appears in early childhood which together with its occurring in different members of the same family seems to indicate a congenital predisposition.

The known theories as to the origin of polyps and the development of carcinoma in them is discussed. In the beginning there are symptoms of catarrh of the large intestine, the stools, sooner or later are mixed with blood and mucus. The diarrhoea and painful tenesmus cause gradual emaciation and death. Sometimes death occurs suddenly from haemorrhage. When diarrhoea persists the polyps often prolapse, rectal prolapse also occurs.

Exact diagnosis is made by digital examination. Little is to be expected from treatment. Irrigation with astringents, curettage of the polyps, the formation of an artificial anus and extirpation of the rectum do not give satisfactory results. The latter is to be recommended only in carcinomatous degeneration. The chief stress is to be laid on abundant nutrition. Hoffma.

Hill T G. Anal and Rectal Growths of Benign or Doubtful Character. *Boston M & S J* 1914, July 197. By Surg Gynec & Obst.

The author calls attention to the small number of benign rectal growths, 40 of these as compared with 76 malignant tumors in his series of 3,000 rectal cases.

The chief interest in rectal tumors lies in the difficulty of diagnosis. Since the two step operation whereby a piece of tumor is first removed for microscopic examination and radical operation performed later if the tumor proves malignant is not recommended an exact diagnosis is essential.

In some regions of the body where some mutilation or slight deformity need only be considered the removal of a growth of doubtful nature may be a matter of small import. This is often true with respect to mammary tumors and statistics are quoted which show that 10 per cent of the complete breast operations in the hands of competent surgeons, are done on benign cases. The removal of a rectal tumor may result in deformity also but what is much more important than this may be serious impairment of function. Another reason given for accurate diagnosis is that the operation in malignant cases is very formidable and mutilating with high immediate mortality 30 to 40 per cent and with small percentage of authentic cures, 10 to 15 per cent. It is therefore not to be undertaken lightly.

Different cases as described which presented conditions liable to be mistaken for malignancy: 1. Blind internal fistula associated with irregular induration occasionally found along their trunks may very closely resemble carcinoma.







common duct opens was transplanted into the colon the papilla also being transplanted

The technique of the operation is described. Of three dogs on whom the operation was performed two died as a result of technical errors in the operation and one lived. He thinks that this transplantation of the ampulla marks a great advance in experimental surgery. In the previous anastomoses between the gall bladder and the stomach or initiating the excretion of bile was disturbed since the bile must be discharged according to purely mechanical laws while the physiological impulse to the secretion of bile effect of albumoses hydrochloric acid etc was done away with. By the transplantation of a piece of the duodenal wall containing the common duct and the ampulla, the physiological impulse was preserved and the discharge of the bile simply transferred to a different part of the intestine. This also lessened the danger of infection of the bile passages as the sphincter of the common duct was preserved. *Utzar Ellis*

Deaver J B and Pfeiffer D B.: Chronic Pancreatitis. *A. S. & Phila. 974 ix 84*  
Byburg Gynec. & Obst.

Complete removal of the pancreas is homicidal partial excision is difficult and but rarely indicated and direct drainage can be accomplished only in very imperfect fashion at best.

Difficulties in dealing with chronic pancreatitis are increased by the fact that no definite laboratory test nor syndrome of signs and symptoms identify it. Hope lies in prompt action in early lesions to prevent development of damage to the parenchyma of an essential organ which can never be repaired.

Several facts have been established: (1) A considerable number of pancreatic inflammations are associated with and are secondary to inflammatory lesions of the alimentary tract particularly the gall bladder and duodenum. (2) The head is more often involved than the body and tail of the pancreas. This is probably due to the close association of the lymphatics of the gall bladder liver and duodenum with those of the head of the pancreas. Deaver and Pfeiffer have shown that pancreatic infection corresponds with lymphatic distribution and not with the distribution of the duct of the pancreas.

Pancreatic lymphangitis occurs with cholecystitis, with or without stones. The effect of the knowledge of lymphatic dissemination of infection has diminished the author's faith in simple drainage of the gall bladder or ducts as a cure-all for biliary and pancreatic infection. Recurrences are more common after drainage for simple cholecystitis than calculus disease of gall bladder or ducts.

We have come to believe that the field of cholecystectomy should be widened and that all gall bladders should be removed that show evidence of chronic infection, independent of obstruction, and, particularly so if the pancreas is involved. Drainage of the common duct should never be omitted in connection with cholecystectomy. *Ismaels Conn*

Walter-Sallis, J. Non-Biliary Pancreatitis (Les pancreatites non biliaires). *Rev. de chir. 19 4, xlix, 446.*  
By Journal de Chirurgie

Non-biliary pancreatitis is rarer than the biliary form. Walter Sallis has collected 50 cases among 250 cases of pancreatitis or 20 per cent. 34 were women and 16 men and it was found at all ages from 3 to 83 years. The bacteriology is variable it may be caused by typhoid malaria measles, scarlet fever pneumonia or mumps. Pregnancy is an important etiological factor. Traumatism annular pancreas and supernumerary pancreas may be responsible. Infection may be through the blood or lymph stream or may ascend through the duct. There is a local reaction of the pancreatic tissue which may be periductular intralobular or scirrhous. In the interlobular form the islands of Langerhans may be spared but in the intralobular scirrhous the internal secretion of the pancreas is affected and pancreatic diabetes results. The development is slow and insidious. There is a mild diffuse pain with a feeling of fullness and weight and occasionally a crisis of epigastric pain 2 or 3 hours after a meal. A crisis of pain may mark the beginning of the pancreatitis. Fever nausea and vomiting accompany the attack which is followed by fatigue and prostration. The appetite decreases and the attacks gradually come closer together sometimes there is distention of the epigastrium and tension of the muscles of the abdomen and sometimes there is a transverse tumor immovable and not clearly defined. The disease becomes progressively worse and death takes place from profound cachexia. Secondary pancreatitis may follow an ulcer of the stomach or duodenum. In non-biliary pancreatitis the pancreas keeps its normal volume and is not so hard as in biliary pancreatitis. Intrapaneal adenitis is rare digestive troubles are much less frequent but icterus is rare. Sometimes there is diarrhoea and hemophilia. Pancreatic insufficiency may be demonstrated by examination of the urine and feces. It may affect the gall passages and liver secondarily. Cancer sometimes complicates chronic pancreatitis.

The treatment is surgical. Exploratory celiotomy is sometimes sufficient to cure curable cases (18 cases with 18 recoveries). Retropancreatic drainage has some effect it may be combined with pancreatectomy in case of stricture of the common bile-duct. There are many objections to partial pancreatectomy and anterior choledochotomy. Gastroenterostomy is indicated. annular pancreas (8 cases). *J. Ockene*

Stassoff B. Surgery of Stab Wounds of the Spleen, with Special Reference to Transplantation of Omentum (Beitrag zur Chirurgie der Milchstichverletzungen unter besonderer Berücksichtigung der isolierten N. transplantat von). *Beit. N. Chir. 9 4 lxxix 61*. By Journal de Chirurgie

The author reports 9 cases of stab wounds of the spleen observed from 1901 to 1913 and discusses

such injuries in general. Solitary stab wounds of the spleen are rare in the great majority of cases they take place through the thorax rarely through the abdomen and the pleura and diaphragm are usually injured. The spleen is most frequently injured when the external wound is in the region of the eighth ninth or tenth intercostal space.

The diagnosis is difficult because the general as well as the local symptoms may be caused by injuries of other abdominal organs and by the injuries to the pleura diaphragm and even lung that frequently accompany them. The prognosis in operative treatment is good the mortality being 18.5 per cent when there are also injuries of the pleura and diaphragm but not of other abdominal organs. It is unfavorable in conservative treatment. The most frequent treatment is suture then tamponing, and lastly splenectomy.

In stab wound of the spleen and small ruptures of the spleen the author recommends a combination of suture with transplantation of omentum by

Loewy's method which gave good results in three of his nine cases. Tamponade is not so good on account of the impossibility of completely closing the wound and the danger of infection of the fistula and of secondary hemorrhage. There are three possible methods of operation for injuries of the spleen: laparotomy, thoraculaparotomy that is thoracotomy and laparotomy and transpleural laparotomy. Transpleural laparotomy is the usual method as it is simply a continuation of the external wound. In injuries from in front or where there are symptoms of intra abdominal hemorrhage or there is a suspicion of injury to other organs of the left hypochondrium thoraculaparotomy should be performed with Zeidler-Krjuhoff's incision which consists of section of the eighth ninth and tenth costal cartilages incision of the diaphragm and a continuation downward along the external border of the left rectus muscle. It is to be preferred to others because it is quicker and easier to make and gives such a large field for operation. OULIAN

## SURGERY OF THE EXTREMITIES

### DISEASES OF THE BONES, JOINTS, MUSCLES, TENDONS. CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Chalaby F: Primary Osteomyelitis of the Femur (L'osteomyélite primitive du fémur) *Thèse de Doct. Toulouse* 94. By *Journal de Chirurgie*

The author describes a case of chronic osteomyelitis of the patella with fistulae and sequestra shown by radiography. He reviews 3 cases of this rare disease which is generally observed between the ages of 7 and 10 in the male sex. Traumatism, ligamentous and collateral ligamentous causes—bacterial infection of the patella the immediate cause.

(1) Case of porotrichosis of the patella described by M. L. RAY and CARAVAN. The osteomyelitis may be acute or chronic the latter being less frequent. It may also be classified as partial or total. In the former there is little cavity filled with pus and a sequestrum on the anterior surface of the bone; in the latter the whole patella is osteonized forming a large sequestrum. After partial or total removal of the patella it is generally regained from the posterior articular surface in children. In this is particularly true in the adult in whom the patella is removed by the subperiosteal method.

The clinical symptoms common to the different forms of malformation of the anterior region of the knee joint are: (1) one point in the patella at right angles to the knee joint and the position of the lower limb in extension.

The two implications possible are: (1) partial porotrichosis of the knee is comparatively benign the other pyarthrosis is very severe. In the former the diagnosis is easy when there

are no intra or extra articular complications. Differential diagnosis must be made from purulent arthritis of the knee osteomyelitis of the lower end of the femur and sometimes from acute rheumatic arthritis. If there are abscesses or fistulae it may be difficult to make a distinction from periarthritis, and acute or suppurative hygroma especially in these two affections may coexist with it.

The chronic forms must be distinguished from lesions caused by syphilis tuberculosis or porotrichosis. Radiography will be of great value in this diagnosis.

The only curative treatment is to amputate the diseased bone. In the partial forms simple curettage of the focus of suppuration may suffice. In the total form the patella should be removed subperiosteally by DuRoi's method. Early mobilization and massage are essential adjuncts to surgical treatment. The results are good but of course in case of simple curettage but satisfactory also with regard to function in case of total removal of the bone. L. CARAVAN

McClure C. R. Sacro-Iliac Traumatism. *With 4 plates* 94. 55 By *Surgery and Obstetrics*

The sacro-iliac joints are true joints, but have been little understood until recently and the author discusses injuries of these joints only. There is a rather careful anatomical description. The injuries are: (1) laceration of the (2) wrench or (3) true luxation (4) relaxation or loose joint.

Injuries of the first type are caused by slight blows to the iliac crest. The pain which comes on cutly is localized to the back and is frequently called lumbago. Moreover the back is decidedly limited and the patient is unable to walk the thigh





of the urine some days after the injections showed that bacilli were still present J DEMOVR

Gilmour A. Hypertrophic Pulmonary Osteo-Arthropathy—Marie's Disease Ed. b. M. J. 1914 xii, 527 By S. G. Gynec. & Obst.

The author reports this case because it is rare to find it in so young a patient.

A boy 9 years old had had when 16 months of age a toe amputated at the metatarsal phalangeal joint for disease at 4 years had an excision of the right knee for tuberculosis developed a marked dorsal kyphosis shortly afterward and at 7 years had swellings of the wrist and fingers, and a little later swellings of the ankle and toes.

He describes a hard bony swelling beginning at the lower third of the radius and ulna increasing toward the wrist a thickening of metacarpal bones a marked clubbing of the terminal phalanges of the hands which was confined to the soft tissues and long curved nails. The lower extremities showed similar symptoms.

He gives the theories of Marie and Bamberger as to the causation of the disease and the finding of Thorburn and Alexander of analyzed cases and concludes by saying that hypertrophic pulmonary osteo-arthropathy is to be found frequently associated with diseases in which there is pus formation or breaking down of tissues with the retention of the secretion and it would appear as if the condition was produced by a chronic toxæmia usually bacterial but occasionally that of altered body metabolism.

JAMES O. WILKINSON

Wolkowitch W. M. Spontaneous Gangrene of the Lower Extremity and Its Relation to Sclerosis of the Vessels (Z. Frag. d. spontan. Gangran der unter. Extremitäten und ihrer Beziehung u. C. f. Sklerose) Pr. kl. r. ch. 9. 4. xii. 9. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author reviews in condensed form the contents of his doctor's dissertation and tries to demonstrate by means of 45 cases 15 of which he gave detailed pathological anatomical examination that the embolic thrombi and tissue proliferations that cause spontaneous gangrene find a favorable soil in the sclerosis of the vessels. The preponderance of spontaneous gangrene in the lower extremities is explained by the more unfavorable mechanical conditions for the vessels of the leg and under the pressure of blood column almost equal to the length of the man they are also compressed and aided by the flexion and tension of the knee which makes great damage to their elasticity.

The place of choice for occlusion of the vessels is at the bifurcation of the popliteal for here two vessels of equal size the posterior tibial and the peroneal divide at an acute angle which forms a rest directly in the middle of the blood stream. The solid particles in the blood—cells, clots of fibrin and lumps of bacteria are carried to the center of the stream they rebound from the crest

and may injure the wall of the vessel. This easily leads to sclerosis, which in turn causes occlusion of the vessel either from thrombus formation or from proliferation of connective tissue. The occurrence of gangrene depends on how soon complete occlusion takes place and whether collateral blood passages have been established. KOKIC

Lapointe A. Rupture of the Articular Portion of the Long Tendon of the Biceps (Rupture du tendon du longiceps brachial dans sa portion articulaire) B. l. et m. Soc. de Chir. 1914 1. 630 By J. Journal de Chirurgie.

Lapointe observed this lesion in a workman of 34 who had made a violent effort to hold a sack of cement weighing 50 kg. which he was carrying on his head. He felt a sudden severe pain in the upper part of his left arm and could not continue his work. After that he had had persistent pain in the arm and shoulder increased by any movement especially flexion of the forearm and a decrease in muscular power which made it impossible for him to work. Regular massage did not bring about any improvement. The arm was elongated and on comparison with the left arm the elbow was seen to be a projection of the external part of the biceps and it was lowered toward the elbow. The difference was about 5 cm. Between this projection and the lower part of the deltoid there was an abnormal depression. On flexion the internal part of the biceps contracted but the external part projected still more. A diagnosis was made of rupture of the long tendon of the biceps at its union with the muscle. This diagnosis was confirmed by operation which showed that the rupture was at the articular. Lapointe did not think it necessary to open the joint to find the proximal end. After having shortened the distal end a few centimeters he fixed it with four No. 2 chromic gut sutures to the edge of a little capsular buttonhole between the two tuberosities. Healing was by first intention. Fifteen months after the operation the biceps normal as to position form and strength. The patient is performing his work again.

In a articular rupture of the long tendon of the biceps is related by frequency though it has attracted little attention. Of 3 cases of rupture collected from the literature 2 were intra-articular. In 8 cases the rupture was indicated by anterior fixation of the articular end and all except one case the result was satisfactory. One interesting point is the relation of rupture of the biceps to the shoulder joint. Ledda however thinks that arthritis is the cause of the rupture and that the rupture is a purely traumatic. The tendon has already been altered by disease. Lapointe thinks this is an exaggeration. His patient was a 34-year-old man 34 years old with no signs of arthritis and the ruptured tendon appeared perfectly normal. Therefore he believes that there is such a thing as true traumatic rupture.

SAVARIALD has had two cases of rupture of the tendon of the biceps. One was a rupture of the

lower tendon common to the two parts of the biceps. He did not perform any operation and the patient who was a vigorous man regained normal function. The second case was that of a workman who ruptured the tendon of the long head. He complained of loss of power. Operation showed the tendon very much elongated rather than ruptured. He pulled the tendon in the manner of an accordion and fixed it to the neighboring parts. The result was good.

SOLISCOUX operated on a typical case of rupture of the tendon of the biceps in a vigorous man of 32 who had made a violent effort in unloading pianos. As he did not wish to open the capsule he fixed the tendon to the coracoclavicular space. He made a hole in the latter muscle passed the ruptured tendon through it from behind to the cartilage around the muscle and passed it a second time through the joint. Then he sutured it to the tendinous portion of the muscle near the coracoid process. Recovery was uneventful and the functional result excellent.

J. DEMETRI

Gassmann T: Study of Rickets (Beitrag zur Erforschung der Rachitis) Jahrb. f. Kinderh. u. Gyn. 1914, 23, 144.

By Zentralbl. f. d. ges. Chir. 1 (1914), 10, 100.

The author found by comparative analytical chemical experiments that the proportions of calcium phosphates, carbonates and water in the rachitic bone is the same as in the normal but the former contains 5 per cent less substance than normal according to Wasmann's formula. The appearance of the disease is caused by disturbances in bone production probably due to the increased magnesium content of the diseased bone as uric acid which is less resistant than those of phosphorus can combine with considerably more magnesium.

Brandes, M: Experimental Study of the Time of Appearance of Bone Atrophy Caused by Disease (Experimentelle Untersuchungen über den zeitlichen Eintritt der durch Krankheiten bedingten Knochenatrophie) Fortsch. d. Chir. u. Geb. d. Frauenk. 1914, 9, 48, 55.

By Zentralbl. f. d. ges. Chir. u. Gyn. 1914, 10, 100.

The author used the os calcis of the rabbit to study bone atrophy. He cut the bicipital tendon and resected the patella. After a while the bone was marked atrophy which could be both the spongy and compact bone. The loss of the outer part of the spongy bone is reduced. The rest of the bone is then a poor part. The loss of the outer part of the bone of the ankle were in level also. Even where the function was only partially destroyed (that is atrophy began) and then the growth of the degree of inactivity of the bone. He and more to use the atrophy from his previous work. He believes that there is no difference between acute necrotic atrophy of the bone and atrophy from disuse. The acute atrophy is entirely from disuse. Atrophy observed in inflammatory conditions of joint diseases are to be attributed to the complete inactivity of the bone.

FRANZ TREIB.

Katase A.: Experimental Calcification in Normal Animals (I. Experimentelle Verkalkung am gesunden Tier) Bei. z. path. Anat. u. allg. Path. 1914, 1, 516. By Zentralbl. f. d. ges. Chir. u. Gyn. 1914, 10, 100.

The author injected guinea pigs and especially rabbits with different quantities of calcium salts subcutaneously intraperitoneally and intravenously and after varying periods of time, sometimes as long as 125 days examined the different organs microscopically for depositions of calcium. He found that in this way calcification could be produced in many different organs, when there had been no previous abnormality of the tissues, and that the degree of calcification depended on the concentration and the quantity of calcium injected at once not on the number of injections or the entire amount given.

It was found further that there was a certain relation between the physiological calcium content of the different organs and the frequency and intensity of the artificial calcification produced in them and that organs with a low physiological calcium content were especially disposed to depositions of calcium. The kidneys and intestine excreted the calcium especially the large intestine but it was also excreted by the lungs in the form of small granules with the bronchial mucus. It was found that elastic fibers and connective tissue were especially predisposed to calcification.

The author purposes to devote further study to the results in human pathology of these discoveries, especially the therapeutic effect of calcium salts in tuberculosis.

Oskar Meyer.

Frenkel Theodor H. C.: Traumatic Disturbances in Nutrition of the Semilunar Bone of the Hand (Beiträge zur Frage der traumatischen Ernährungsstörung des Lunatum manus) Fortsch. d. Chir. u. Geb. d. Frauenk. 1914, 9, 48, 55.

By Zentralbl. f. d. ges. Chir. u. Gyn. 1914, 10, 100.

The author discusses the post-traumatic changes in the scaphoid and semilunar bones of the hand first described by Preiser 18 years ago and later described by Hirschhorn, Grollenberg, Kleinbock and others. He reports two cases of such a disease of the semilunar bone observed by him in the Zurich surgical clinic one of which was operated on.

One of the cases was in a 25-year-old maid the other a 33-year-old adult male who had had trauma of the hand. After 1 or 2 months the symptoms had increased to such an extent that the function of the hand was seriously interfered with. The semilunar bone was removed by operation. The examination showed irregular contour and structure caused by irregular deposition of lamellae, abnormally dark place caused by thickening of the lamellae in place and abnormally clear spots the result of the disorganization and the formation of connective tissue.

These two cases correspond in all details to typical cases of Kienbock's traumatic malacia of the semilunar bone. The conclusions are as follows:

1 That these two cases are typical cases of traumatic disease of the semilunar (Kienbock's traumatic malacia Preiser's traumatic disturbance of nutrition)

2 The cases are to be classified with the 16 described by Kienbock on account of (a) the course of the disease which in one case was shown by the history to be due to trauma and in the other there was probably a trauma unknown to the patient (b) the clinical picture which consisted chiefly in limitation of the movements of the wrist joint pain on attempts at motion and in certain pain points in the region of the semilunar (c) the radiological picture which showed abnormal clear spots thickenings flattening and decrease in size of the bone (d) the macroscopical findings which indicate two fractures of the bone occurring at different times and make it probable that a Kienbock's secondary pressure fracture occurred in a bone that was primarily otherwise diseased

3 The theory first set forth by Preiser in regard to the scaphoid and later extended by Kienbock to the semilunar that there is a primary traumatic disturbance in nutrition by rupture of the ligaments and vessels followed by porosis and secondary fracture is verified by the clinical and radiological symptomatology of the preceding cases of bone disease

4 There is a certain parallelism so far as traumatic disturbance of nutrition is concerned between this disease of the semilunar and the so called Kohler's disease of the scaphoid of the foot

BRADLEY

Dickson F D and Willard D P The Results of Joint Tuberculosis in a Series of Two Hundred Cases, Which Have Been Under Observation for Five or More Years. P. M. J. 94 11 724 B. Surg. Gynec. & Obst.

Dickson and Willard report the results in 200 cases of joint tuberculosis which had been under observation for five or more years. The three main points of their investigations were the percentage of total cures a comparison of the results obtained by the different types of treatment and the value of the early beginning of treatment after the onset of symptoms.

The treatment in these cases was conservative and consisted of rest in bed for the acute cases with absolute fixation of the diseased joint. The fixation was secured by placing the patient on a Bradford frame with an anterior wire plint molded to the patient's trunk, a cast of tuberculosis of the spine and to the trunk and entire limb in hip and knee case the anterior plint being fastened to the frame by webbing straps or bandages.

The bacilli and bronchi were also treated by fixation plaster of Paris cast or some type of brace and support, being taken care to secure the best fixable possible including the cast or brace the joint below and below the affected one.

The authors urge the importance of beginning the

patient's general health up to the best possible condition by careful feeding plenty of fresh air and sunlight and hygienic measures. In hospital cases the importance of social service workers to keep track of the patients and see that they return at suitable intervals for treatment is emphasized and much of the improvement in results in this class of cases noted in the last few years is ascribed to this supervision.

The paper is largely statistical and the results presented strongly support the conclusions of the authors which are as follow:

1 The results of the present combination of conservative and hygienic treatment may be considered as satisfactory.

2 There can be no doubt that the early institution of treatment has a marked beneficial effect on prognosis as to deformity and as to ultimate recovery.

3 Results would indicate that the earlier in life the onset the more favorable the prognosis.

4 In the acute stages treatment in bed is the most efficient remedy.

5 Prolonged sinus formation with mixed infection markedly favors the general distribution of the tuberculous process from the localized focus and increases the danger of a fatal termination.

6 The strict enforcement of hygienic measures during the whole course of the disease and the supervision of the patient after leaving the hospital are essential points in the treatment of joint tuberculosis.

Dyas F G Clinical and Experimental Results of Streptococcal Infections, with Special Reference to Arthritis and Its Treatment. S. G. C. & O. B. 94 11 734

By Surg. Gynec. & Obst.

The purpose of the experiments detailed in this paper is to show the failure of intra-articular injections in streptococcal infections of the joints. The organisms used for the intravenous injection on of the experimental animals were recovered from the crypts and cut surfaces of tonsils removed from patients suffering with acute articular rheumatism and carditis. The organisms were grown on agar for twenty-four hours and then suspended in salt solution and injected intravenously.

Attempts were first made to protect certain joints by the intra-articular injection of solutions of 2 per cent formalin in glycerine. Next attempts were made to protect certain joints by the intra-articular injection of 10 per cent iodoforn emulsion. Other joints were injected with 1 per cent solutions of sodium salicylate. All intra-articular injections were made at the same time as the intravenous inoculation.

The results in all cases were uniformly the same namely the injected joints were always more severely attacked by the streptococcus than the joints which had not been injected.

Attempts were then made to protect the entire animal by the intravenous injection of sodium ca-

they late at the same time that the intravenous inoculation was made. In every instance this gave only temporary relief joint inflammation and septicæmia occurring.

Two clinical cases are cited showing the method of entrance of the streptococcus into the circulation. The author summarizes as follows:

1 In each animal multiple suppurative arthritis developed in from 24 to 72 hours, depending upon the amount of streptococci injected and this occurred regardless of whether attempts had been made to protect certain joints by injections of different solutions, or to protect the entire animal by intravenous injections of sodium salicylate.

2 Swelling and stiffness of the larger joints were noticed after 24 to 48 hours in all cases.

3 At post-mortem thick purulent material was found in the joints which could be scraped away leaving the synovial membrane dull and lusterless.

4 Destruction of articular surfaces of bones, ligaments and cartilages may occur when the animals do not succumb too early to streptococic septicæmia.

5 Cultures from the heart's blood and from the pus from joints in the animals used gave pure cultures of streptococci.

6 The greatest pathologic changes occurred in those joints in which attempts had been made to protect them by injections of formalin or iodoform.

7 Intravenous or intra-articular injections of sodium salicylate in solutions as strong as 25 per cent have no permanent effect upon streptococic arthritis.

8 Intra-articular injections of solutions of formalin in glycerine or iodoform emulsion do not protect the joints so treated.

9 Aspiration of the pus and injection of antiseptic solutions after infection of a joint had taken place did not give favorable result in the animals injected intravenously with streptococci.

Meisenbach R O : Pseudo-Arthritis Produced by Interpolating Sheet Silk and Bayberry Wax.  
*Am J Orth Surg* 9 : 41, 42.

By Surg. Gynec. & Obst.

The author classifies ankylosis first as real and second as apparent and believes that it is a residual outcome of a former disease. In apparent ankylosis a fibrous union may or may not exist between bones the cartilage may or may not be attached.

The X-ray will show a line of demarcation between the bones but clinically it is considered an ankylosis.

In real ankylosis, no line of demarcation exists, cartilages are destroyed and bony union is present there is atrophy and adhesions of the capsule and surrounding tissues and the synovial lining has lost its physiological function. His opinion is that prepared animal membrane atroped during operative procedures acts as a post-operative irritant the reaction is too violent at times due to liberation into the joint of an excess of chromic acid.

The fascia and muscle-flap interposition have their questionable results. To his mind the interposition of bayberry wax upon the finest silk as a vehicle will prove the least irritant or objectionable, and will result in a greater limit of motion.

A few clinical cases are reported with apparently favorable results.

H. W. MALTIN.

Brackett E. G. : The Use of Iodoform Oil in Joints.  
*Bost. M. & S. J.* 914, 873.

By Surg. Gynec. & Obst.

Brackett reports his technique for putting oil or other medicinal agents into joints also the proper selection of cases for this operation.

He lays especial stress on the technique emphasizing the fact that the open incision should always be used, because in this way only can a joint be explored and all the adhesions properly freed. Also it gives an opportunity to obtain a specimen for microscopical examination and so help out diagnosis.

The incision in the skin is usually on the inner side of the knee in the form of a blunt ellipse in the fascia a smaller ellipse in the opposite direction. A straight and shorter incision is made in the capsule about one half inch from the border of the patella in the vertical direction of the limb. A special stitch is used to close the capsule—silk being used throughout. A continuous suture is made, beginning at both ends, and including the fibrous portion of the capsule but not quite through the synovia thus making the synovia act as a valve. Two mattress sutures are used to close the middle of the incision. The opening of one is placed above the incision and the second smaller one is enclosed by the first and its opening placed below. The syringe is inserted between the threads of the inner mattress, and the stitches are drawn tight. This allows the oil to be put into the joint under tension. It is the tension of the oil in the capsule which the writer believes is of the greatest importance.

Olive oil is used, great care being taken to get a pure neutral acid free oil. The French oil is the best. It is sterilized in boiling water for one-half hour. Three and a half to four ounces are used in an adult joint.

Brackett urges especial care in the selection of cases for this operation. He says it is applicable to the cases of capsular involvement of various types of infection and in stages in which there is no involvement of the articular surfaces. There are two groups.

Cases of old infection in which adhesions have been freed and it is desirable to keep the surfaces apart. (The use in these cases is largely mechanical.)

2 Cases of infection (a) Acute infection—Neisser etc. (b) tubercular synovitis—early stage and (c) chronic arthritis—selected cases.

The procedure is not a substitute for arthroplasty and is not applicable to cases of disease of any origin in which the X-ray shows involvement of the articular surfaces.

In early tubercular cases the most marked ad-

definite improvement occurs. The injections are repeated several times, at intervals of 8 to 12 weeks. The procedure does not take the place of fixation and rest but permanent fixation is not advisable.

LLOYD BROWN

Herrik W. P.: Massage and Movements for Certain Affections of Muscles and Ligaments.

Am J Surg 1914 1 320

By Surg. Gynec. & Obst.

If friction is taken that massage and passive movements are very valuable for such conditions as:

1. Traumatism of ligaments and muscles, under which he considers (a) contusions (b) ruptured muscle fibers (c) myositis and (d) sprains.

In contusion gentle centrifugal stroking dulls sensation and prevents congestion and swelling. He cites a few cases in which this treatment seemingly diminished the time of cure very materially.

In sprains the effusions in joints react wonderfully to massage especially of the smaller joints such as the wrist, ankles, elbow and phalanges.

2. Disturbed function and nutrition of muscles as in fatigue. Locally as in weak foot or flat foot and in curvature.

3. Disturbed innervation of muscles as in locomotor ataxia and anterior poliomyelitis.

He considers acute infection the only contraindication. His conclusions are as follows:

1. Increase nutrition and function are essential to the cure of many affections of muscles and ligaments.

2. In obviating deformity interference with function should be avoided.

3. Massage and movement are important aids to these and should be much more generally used by surgeons. HERIK W. P. BELL.

## FRACTURES AND DISLOCATIONS

Ross C. G. Fracture of the Surgical Neck of the Humerus. P. M. J. 94 11695

By Surg. Gynec. & Obst.

Fracture of the surgical neck of the humerus are practically always the result of external violence and rarely due to muscular action. The fracture is most apt to occur within the elbow fixed and the force exerted directly on the shoulder or by forcible bending on the elbow with the shoulder held rigid. The deformity produced is occasionally the result of the force produced by the trauma but most frequently due to muscular action therefore a minute knowledge of the anatomy of the shoulder is necessary for proper understanding of the condition and successful direction of fixation.

1. This fracture has the typical deformity: abduction of the upper fragment by the supraspinatus and outward rotation and flexion by the infraspinatus and teres minor. The lower fragment is drawn inward by the transverse pectoralis major and the teres major and pulled inward into the axilla by the biceps and humeral triceps and deltoid.

If the fracture is impacted this deformity does not exist to the same extent.

As complications fracture of the tuberosities occurred in 17.8 per cent of the author's cases and luxation of the head in 3.57 per cent in one series and 8.25 per cent in another. The latter is the most troublesome of all complications of the fracture under consideration.

The fracture is most common in middle and old age but 13.3 per cent of Ross' cases were under 16 years of age. Lymphatic separation is more likely to occur in children.

In the treatment of simple fractures Ross considers the way of great importance to confirm the diagnosis and guide the treatment throughout. In impacted fractures the impaction is not to be broken up unless the fragments are in bad position. All that is necessary is to keep the arm suspended by a sling from the wrist. In the ordinary fracture reduction is secured by extension and abduction when as a rule the fracture will remain in good position when the arm is brought down to the side. Ross considers that the best results are secured when extension is added to the older method of dressing of binding the arm to the side with a shoulder-cap and pad in the axilla. The extension may be secured in various ways but best by Buck's extension with a weight of four or five pounds suspended from the elbow. This treatment causes some discomfort at first and the patient should sleep in an armless chair but the excellent results compensate for this. In cases where it is necessary to combine extension and abduction some form of apparatus such as that designed by Middledorpf, Von Hacker, Osgood and Enghallow can be used. This combination is only necessary when there is marked abduction of the upper fragment. Plaster may be used as dressing combined with extension if desired.

Ross considers operation necessary but rarely except in compound fractures. It is required most frequently when the lower fragment is displaced to the outer side. Fracture complicated by complete luxation of the head requires operation for replacement and fixation. Partial luxations frequently disappear under extension. Involvement of the tuberosities presents no special problem.

FRANK D. DICLISO

Mallet A. Lat. Paralysis of the Ulnar Nerve, Following Fractures of the External Condyle of the Humerus (Paralyses tardives du nerf ulnaire dans les fractures du condyle externe de l'humérus). J. Ch. 94 437

By Surg. Gynec. & Obst.

Mouchet has had 7 cases of paralysis of the ulnar nerve coming on at periods varying from 5 to 27 years after a fracture of the external condyle of the humerus. He gives case histories of four of these patients three of whom he operated upon.

In all the cases there had been a fracture of the external condyle in infancy or early childhood. The external condyle is pushed upward and

rophied. The fracture surface turns outward and forms a projection which can be seen plainly. In almost all cases a callus permeable to the X ray is formed between the fragment and the rest of the humerus. The ascent of the external condyle and the change in the line of articulation alters the position of the olecranon bringing it nearer to the internal condyle so that the ulnar groove is partially obliterated and the nerve is more or less stretched over the inner border of the olecranon especially when the elbow is extended. Also because of the changes in position there is an exaggeration of the physiological carrying angle (cubitus valgus). In the normal condition the angle between the axis of the arm and that of the forearm is about 170 degrees; in these cases it may be decreased to 150 or even 135°. Finally as a result of the abnormal position and the tension on the nerve neuritis

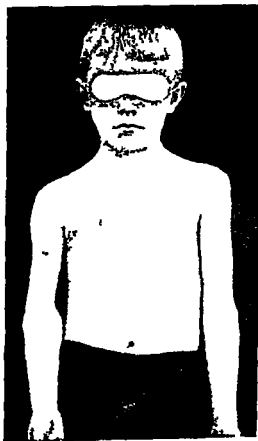
develops. The fracture may have occurred so long before that the patient has forgotten it and various mistaken diagnoses are made. Whenever there are symptoms of neuritis of the ulnar nerve and the cause is not known an examination should be made for evidence of an old trauma. Radiographic examination will show an old fracture and electrical examination will show the degree of paralysis and the prognosis.

The author treats these cases by supracondylar cuneiform osteotomy of the humerus. If the external condyle projects too much it is previously extirpated through a small incision  $\frac{1}{4}$  to 2 cm long over its external surface. It is easily removed by a blow with the chisel. The wound is closed without drainage and an incision 3 cm long is made over the internal edge of the humerus down to the bone. Then with a MacEwen chisel the



Fig

Fig. 1 (Mouchet) Case of very marked cubitus valgus.



Fig

Fig. 2 (Mouchet) Same case after operation of correction of the cubitus valgus.

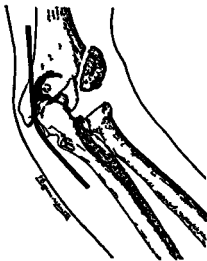


Fig 3

Fig 3 (Mouchet) Diagram showing the tension of the ligament of the elbow joint after a supracondylar fracture of the humerus. The olecranon process is shown in the cubitus valgus following fractures of the external condyle.

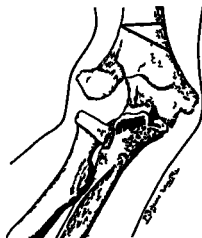


Fig 4

Fig 4 (Mouchet) Supracondylar cuneiform osteomyelitis of the humerus.

humerus is incised perpendicular to the prolongation of the axis of the forearm and a thumb's breadth above the internal condyle. A second incision is made perpendicular to the axis of the diaphysis so that a wedge of bone is removed just large enough to correct the position of the arm. The fracture is completed with the hands. To immobilize the humerus it is simply dressed with a Velpeau bandage. The skin is sutured without drainage. No attempt is made to see or touch the nerve. The correction of position removes the source of irritation and recovery follows. In the author's cases pain disappeared at once and the arthritis improved rapidly. The completeness of the recovery depends on the extent to which the nerve has been affected.

A. Goss.

Mouchet A. Congenital Dislocation of the Scaphoid of the Wrist Simulating Fracture (Dislocation congenitale du scaphoïde carpien simulat une fracture articulaire carpi bipartite). *Rev d'orthop* 94. By Journal de Chirurgie.

Mouchet publishes a case of congenital dislocation of the scaphoid of the wrist and reviews the history of this anomaly in bone formation that is little known in France.

This case was that of a young man of 19 who came to the hospital for a compound wound of the leg. In the course of the examination there was noted a symmetrical anomaly of the hands characterized by the ring finger being longer than the middle finger and by special shortness of the second phalanx of the index middle and little fingers. The feet showed marked shortness of the second phalanx.

of the second third fourth and fifth toes on both sides. Radiographs showed that the apparent elongation of the ring finger was due to the fact that its second phalanx was of normal length while there was congenital shortness of the second phalanges of the other fingers. The articular cartilages were not visible and ossification seemed to be complete. The radiographs also showed an anatomical peculiarity of the left carpus. The scaphoid was divided into two portions at its neck, the scaphoid on the external side articulated with the trapezium, the trapezoid and the os magnum, that on the internal side with the radius, the semilunar and the os magnum. The young man had never had a trauma of the left upper limb. Moreover the absence of protuberances or bony irregularities, the atrophy of the internal scaphoid and the appearance of the line of separation which resembled a line of articulation rather than a line of fracture all indicated that it was a congenital anomaly of the bone and this supposition was rendered more probable by the concomitant shortness of the fingers and toes.

The bipartite scaphoid divided into radial and ulna scaphoid has been described by Wenzel, Grube, Struthers, Pitman and Wolff and Schulz. It is probably due to lack of fusion of the two points of ossification of the scaphoid. Fitzner has found it in a proportion of 0.5 per cent and Thilenius in a proportion of 3.5 per cent. The existence of this anomaly should be borne in mind in order to avoid making a mistake in the diagnosis of fracture of the scaphoid; an industrial accident that presents simple contusion of the wrist. If it is bilateral or associated with other anomalies of the bones it is easily diagnosed but if it is unilateral as is generally the case careful clinical and radiological examination

is necessary. Bipartite scaphoid may be diagnosed from the insignificance of the trauma, the absence of physical signs and functional disturbance, the lack of displacement of the two parts of the scaphoid, the clearness of the line of separation and the smoothness of the surfaces.

ALBERT MOUTCHER

Sabin, C. G. Fractures of the Pelvis, with Report of Cases. *Vorh. Med.* 1914, 59.

By Surg. Gynec. & Obst.

Illicit fractures receive little space in standard works which Sabin believes is wrong considering the high immediate mortality and the complications due to serious injury to soft parts. The various arches which enter into the architecture of the pelvis and the strength of the ligaments form a part of the skeleton to fracture which great force is necessary. Illicit fractures constitute 0.3 per cent of all fractures.

According to the violence and the direction of application a variety of combinations of fractures, displacements, and injury to soft parts results. The diagnosis is generally easy but great bruising of the soft parts interferes with it at times or some other severe injury may direct attention elsewhere. Breaks of the crest permit walking and are easily recognized. There may be little crepitus. As the patient is often in shock, great care should be used in seeking crepitus; points of fixed pain should be looked for. Flexion of thighs is often painless but pushing or pulling in the long axis is likely to be painful. Fracture of the floor or posterior edge of the acetabulum usually requires the X-ray for diagnosis as to the extent of displacement and position. The pelvic ring may be broken by a force laterally or from front to back but the break is usually vertical and in front or behind. Commonly fractures of single bones are those of the crest or spine of the ilium. A most common rupture of the ring is a front to back force driving in the central portion of the pubis. The force continued may cause a break between the sacrum and the ilium on one or both sides.

The serious aspects of pelvic fractures are injuries of the bladder, urethra, rectum, pelvic vessels and nerves, and often of proportion to the displacement. Rupture of a full bladder may occur away from the point of bony contact. Prognosis is hard to give depending much on the amount of injury to the urethra and the promptness of efficient treatment. The author comments on the remarkable brevity of the literature on treatment. In the simple fractures three or four weeks in bed effects cure. Most writers advise a firm pelvic band if the fracture breaks through the ring but the author doubts that some of them ever tried it. He found that increased the pain greatly and did no good—in one case it actually increased the deformity. The best support was a Bradford frame with the canvas not too tight so the trough formed by the body would exert a slight side-to-side pressure on the pelvis. Extension and counter extension can be used if needed. With a

frame there is no movement of pelvis in using the bed pan. Filling the bladder with water to determine rupture of urethra is to be condemned. Injuries to viscera should receive careful and immediate attention. Eight interesting cases and their treatment are briefly described.

C. A. STONE

Estes, W. L.: Compound Fractures of the Bones of the Extremities. *J. Am. Med. Ass.* 9, 4, 1916.

By Surg. Gynec. & Obst.

Estes gives his personal experience and valuable suggestions regarding 2,080 fractures, 800 of which were compound. The treatment is considered under the following headings: (1) First aid (2) permanent treatment (3) embracing special considerations (4) and as to results. The first aid suggestions include a general gauge of the patient's condition, morphine for pain and control of hemorrhage by packing with sterile gauze. He does not use the tourniquet and makes no effort to set the bones at this stage of the treatment.

Regarding special considerations under the heading Permanent Treatment, he considers the individuality of the patient, his environment and the actual condition of the injured member. He recommends a general anesthetic for examination for disinfecting the injured part, he dries with benzine, ether or turpentine and alcohol, then punts with iodine.

Conditions determining amputation rather than attempts at conservation are:

1. If the skin has been so crushed or lacerated that it is evident that at least three-quarters of the periphery or the fracture will slough, and the muscles beneath are badly lacerated or comminuted, amputation will be inevitable.

If there has been a circular or annular destructive pressure on the whole periphery of the limb at the site of the fracture or very near it, amputation will be necessary.

3. If in a case of compound fracture with a serious annular laceration of the skin the subjacent muscles are badly comminuted, it will be best to amputate.

4. If the injury has been produced by tremendous pressure as of a car wheel or heavy pillars of iron or steel, the limb may have the bulk of it while the periphery or nearly all of it killed but not infected, but the muscles beneath will be torn across and the bone comminuted. Such injuries require amputation.

5. If the main blood vessels are torn across, the irregularly jagged wound common in these injuries, amputation will be necessary. Neither anastomoses nor transplants of blood vessels will succeed in this class of injuries. The laceration of one of the chief vessels when there remains an extremity does not necessitate amputation. The large nerve trunks will stand much more injury than blood vessels and may be sutured successfully unless a long segment of the nerve be destroyed.

6. If the bone or bones are comminuted so that the fragments are loose and deprived of periosteum





After reduction immobilization is necessary but this must be shortened to prevent stiffness. Two months is the minimum three the maximum even for older children. The position is 90 degrees flexion and 90 degrees abduction no rotation. After this first period of immobilization an adjustable apparatus is applied which maintains abduction and flexion and permits the patient to walk. This is worn from four to six months and then is removed giving the patient complete liberty. A perfect gait is restored in from six months to two years in some cases others may require three to five years and still others may never have complete restoration of function because of conditions due to age. The anatomic results secured by this treatment have been about 97 per cent cures. W. I. CLARK.

Ilardouin P: Clinical and Experimental Study of Traumatic Backward Luxations of the knee (Étude clinique et expérimentale sur les luxations traumatiques du genou en arrière) *Rev d'Chir* 914 *Chir*, 357 By *Journal de Chirurgie*

Since the publication of Malgaigne's 12 cases Ilardouin has found 17 new cases in France and enough in the foreign literature to bring the new cases up to 79. He divides them into (1) direct luxations complete or incomplete (2) luxations backward and outward (3) luxations backward and inward (4) luxations backward with rotation. He discusses the experimental work of other authors and describes his own. He has been able to reproduce experimentally all the forms of backward luxation found clinically and on the cadaver. He has found that luxation backward was possible with the preservation of a certain number of ligaments intact or at least only slightly injured especially with preservation of one or both of the lateral ligaments.

A concomitant luxation of the fibula on the tibia is frequent in certain of these forms while incomplete backward luxation with integrity of the anterior ligament is possible. Even complete luxation has seemed possible in some cases without great displacement. Generally the anterior crucial ligament is torn from its periosteal attachment and elongated. Luxation backward is impossible with integrity of the anterior and posterior crucial ligaments. Autopsy amputation or operation has made direct study of the lesions possible in 7 cases. In 13 cases there was direct backward luxation in 3 cases luxation backward and outward in 6 cases luxation accompanied by external rotation in one case rotation inward, and in 1 case there were lesions of the popliteal vessels, which necessitated removal when death did not occur before operation.

The crucial ligaments are often ruptured. This was noted in 11 cases out of 12 of complete luxation. In a total of 93 published cases there have been 64 direct backward luxations 27 of them complete 22 incomplete and 5 not specified luxations backward and outward 1 backward and inward 3 by external rotation 14 by internal rotation 1. Lesions

of the extremities of the neighboring bones are relatively infrequent. Vascular lesions are very frequent. Skin wounds are rare. Displacements from indirect causes, such as sudden arrest of the extended leg or suspension are not rare. Displacements by rotation result from forced torsion of the leg. The knee is large shows hamarthrosis and is increased in its anteroposterior diameter. Bayonet shaped deformity is characteristic. Spontaneous motion is impossible abnormal movements to varying degrees being the rule.

In complete luxation there is shortening. The immediate complications are opening of the joint fractures ruptures of the vessels, and thrombosis. The late results are stiffening of the joint and limitation of motion sometimes exaggerated flaccidity or recurrent luxations. The differential diagnosis, which is generally easy must be made from fractures of the upper extremity of the tibia or of the lower extremity of the femur. As rapid reduction as possible should be made to avoid pressure on vessels and nerves. General anesthesia is necessary. In general the results are satisfactory often even excellent. Old irreducible dislocations necessitate operation. Among the complications rupture of the vessels is the most serious and thus far it has been treated only by amputation perhaps, in the future suture of the vessels will be attempted. The treatment of late complications varies with the nature of the complication. J. OBERNEC.

## SURGERY OF THE BONES, JOINTS, ETC.

Hughes B: The Complications and Treatment of Compound Fractures. *Chir* 914, 11, 397 By *Surg. Gynec. & Obst.*

From the point of view of treatment compound fractures may be divided into three classes:

1. Those of slight severity in which there is a small skin opening the bones not protruding and not visible.

2. Those of medium severity with considerable external opening the fractured ends not protruding but visible the displacement being small.

3. Severe compound fractures, both those involving and those not involving joints. Bone protruding through the skin, stripped of periosteum and usually soiled the latter depending upon the locality where the injury was received.

4. Another class includes fractures of bones normally situated close to mucous membranes. These are unfavorable on account of the organisms normally present.

Repair in compound fractures is usually slow and the amount of callus less than in simple fractures, possibly due to widespread anoxia or to stripping of the periosteum. If sepsis is present it naturally prolongs the process of union. The thorax has been seen fat embolism as a complication in those cases where it was supposed to be present it proved to be some other condition.

Tetanus may occur in cases subjected to road

so long though it is not common and all these should be given antitetanic serum

The main complication is sepsis. With it convalescence is slow. Muscles and other tissues are involved. Sequestra are formed. The periosteum becomes fibrous, its power of bone regeneration lessened and the utility of the leg is seriously impaired.

In all cases a wad of cotton soaked in carbolic acid (1:20) or a strong antiseptic is placed over the wound. The patient is anesthetized the clothing removed and the skin about the wound is cleansed.

The two principles to be remembered are (1) prevention of further infection of the wound (2) elimination of whatever infection is present.

If the fracture is of the first class the wound is thoroughly disinfected with Lister's strong lotion composed of equal parts of 1:20 carbolic acid and 1:500 corrosive sublimate. The fracture is reduced the skin about the wound is excised as in all classes and the wound closed. The limb is put in splints and the patient put to bed with the leg up.

In the second class the wound is irrigated and dried. The bone sponged with pure carbolic acid and washed with saline solution. The ends of the bone are brought together and the periosteum drawn over the fracture by catgut. The skin is sutured and drainage made through an independent opening. This periosteal bridge seems very successful and the author loses not believe in introducing any foreign substance.

In class three the protruding ends of the bone are thoroughly cleaned and may be scrubbed with Lister's mixture. If the ends are very dirty they may be cut off and touched with pure carbolic acid. The wound is irrigated and the skin and tissue cut away and sterilized. The bones are then brought together and bridged with periosteum. The wound is closed and treated as above.

In those cases in which there was suppuration the infection was mild. The most common organisms found where the condition was present were staphylococcus, bacillus, and streptococcus. Similar to the one found in pyorrhea alba and the bacillus of the mouth. When suppuration appeared the tissue was removed. A plaster was applied and the wound was healed out daily with peroxide and sterile saline solution. In all these cases an antiseptic line was used. The results were most gratifying. If intestinal stasis was present an intestinal antiseptic was given.

When the wound has healed daily massage should be used to prevent union.

Diabetes should always be thought of and a Wassermann must be a routine. If syphilis is present antisyphilitic treatment should at once be instituted.

W. E. O'RIELLY

Clarke J. J. Open Operations in the Treatment of Fractures and Dislocations. 1914. 490 pp. H. J. Surg. Cynec. & Obst.

In many cases of recent simple fracture by operation gives the best result. I approach with

the subject it is best to make an anatomical subdivision as follows:

1. Fractures involving joint cavities including some epiphyseal separations.

2. Fractures close to joints including most epiphyseal separations and injuries to the carpus and tarsus.

3. Fractures of the shafts of the long bones.

4. Fractures of the flat bones.

5. Fractures of the bones and skull face or of the spine.

Injuries at or near joints have longest been recognized as demanding open operation. Open operation in recent fractures of the long bones has of late demanded almost more attention than joint injuries. Clinical conditions must be carefully considered before operation is decided upon. In some cases late operation is necessary on account of non or faulty union.

In all operations the technique should be perfect and the assistants should be well trained and adequate. Recently with improved technique early operation has become more general. The sooner the operation is performed the sooner can massage and movement be begun.

This branch of operative surgery demands a vast array of important technical details. The details used in the fracture of the patella are illustrated by the author. Union without operation is difficult because the soft parts fall between the fragments. The author illustrates methods of holding the fragments by a wire loop by a screw by a bolt and by a Lane plate. He thinks the simplest method best and inclines to the use of a wire loop. If it is decided to drill the bone for a wire or screw it should be ascertained that the bone is strong enough to bear drilling. If no apparatus is at hand the capsule may be closed by a stout silk suture on each side of the patella. The whole tear is then sutured.

When epiphyseal artilage is present in the neighborhood of a fracture it should not be involved in any metal apparatus. A silk suture is usually sufficient if a plate must be used it should be removed as soon as union is firm to avoid interference with growth.

Rupture of the patellar ligament or the quadriceps requires open operation and suture.

Other knee joint injuries that call for operation are:

1. Displacement of the femoral condyles in which the patella thus allowing access to both cartilages.

2. Dislocation of the knee with laceration of the ligaments.

In tears of the cruciate ligaments the joint is opened by a vertical incision of the patella and the ligaments are sutured. A separated piece of the ligament is secured by wiring. Separation of the ligament of the femur or of the shaft above it may need to be pinned into place.

Dislocation of the patella may need use of the tension ligament.

After reduction immobilization is necessary but this must be shortened to prevent stiffness. Two months is the minimum three the maximum even for older children. The position is 90 degrees flexion and 90 degrees abduction no rotation. After this first period of immobilization an adjustable apparatus is applied which maintains abduction and flexion and I permit the patient to walk. This is worn from four to six months and then is removed giving the patient complete liberty. A perfect gait is restored in from six months to two years in some cases others may require three to five years, and still others may never have complete restoration of function because of conditions due to age. The anatomic results secured by this treatment have been about 97 per cent cures. W. A. CLARK

**Hardouin P.** Clinical and Experimental Study of Traumatic Backward Luxations of the knee (Étude clinique et expérimentale sur les luxations traumatiques du genou à rebroussement). *Rev. d'orthop.* 1914, 11, 327. By *Journal de Chirurgie*

Since the publication of Malgaigne's 12 cases Hardouin has found 17 new cases in France and enough in the foreign literature to bring the new cases up to 79. He divides them into (1) direct luxation complete or incomplete (2) luxations backward and outward (3) luxations backward and inward (4) luxations backward with rotation. He discusses the experimental work of other authors and describes his own. He has been able to reproduce experimentally all the forms of backward luxation found clinically and on the cadaver he has found that luxation backward was possible with the preservation of a certain number of ligaments intact or at least only slightly injured especially with preservation of one or both of the lateral ligaments.

A concomitant luxation of the fibula on the tibia is frequent in certain of these forms while incomplete backward luxation with integrity of the anterior ligament is possible. Even complete luxation has seemed possible in some cases without great displacement. Generally the anterior crucial ligament is torn from its perosteal attachment and elongated. Luxation backward is impossible with integrity of the anterior and posterior crucial ligament. Autopsy amputation or operation has made a direct study of the lesions possible in 27 cases. In 13 cases there was direct backward luxation in 3 cases luxation backward and outward in 6 cases luxation accompanied by external rotation in one case rotation inward, and in 12 cases there were lesions of the popliteal vessels which necessitated removal when death did not occur before operation.

The crucial ligaments are often ruptured. This was noted in 13 cases out of 22 of complete luxation. In a total of 93 published cases there have been 64 direct backward luxations 27 of them complete 22 incomplete and 15 not specified luxations backward and outward 17 backward and inward 3 by external rotation 14 by internal rotation 1. Lesions

of the extremities of the neighboring bones are relatively infrequent vascular lesions are very frequent skin wounds are rare. Displacements from indirect causes such as sudden arrest of the extended leg or suspension are not rare. Displacements by rotation result from forced torsion of the leg. The knee is large shows hemarthrosis and is increased in its anteroposterior diameter. Bayonet shaped deformity is characteristic. Spontaneous motion is impossible abnormal movements to varying degrees being the rule.

In complete luxation there is shortening. The immediate complications are opening of the joint, fractures ruptures of the vessels, and thrombosis. The late results are stiffening of the joint and limitation of motion sometimes exaggerated flaccidity or recurrent luxations. The differential diagnosis which is generally easy must be made from fractures of the upper extremity of the tibia or of the lower extremity of the femur. As rapid reduction as possible should be made to avoid pressure on vessels and nerves. General anaesthesia is necessary. In general the results are satisfactory often even excellent. Old irreducible dislocations necessitate operation. Among the complications rupture of the vessels is the most serious and thus far it has been treated only by amputation perhaps in the future suture of the vessels will be attempted. The treatment of late complications varies with the nature of the complication. J. O. CRIC

## SURGERY OF THE BONES, JOINTS, ETC.

**Hughes, B.** The Complications and Treatment of Compound Fractures. *Cl. J.* 914, 11 in 307. By *Surg. Gynec. & Obst.*

From the point of view of treatment, compound fractures may be divided into three classes:

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4 Another class includes fractures of bones near the joint situated close to the joint membranes. These are unfavorable on account of the organisms normally present.

Repair in compound fractures usually slower and the amount of callus less than in simple fractures possibly due to wider separation or to stripping of the periosteum. If sepsis is present it naturally prolongs the process of union. The author has never seen fat embolism as a complication in those cases where it was supposed to be present it proved to be some other condition.

Tetanus may occur in cases subjected to road

Two of the 101 fractures of the patella were not operated on. In one of these the two fragments were separated but slightly and the tendinous expansion of the vastus muscle had not been torn. Adhesive plaster held the fragments together with satisfactory result.

When operation was the method of treatment it was usually performed 48 hours after the injury. A curved incision was used and the flap which included the skin and all structures to the patella tendon was dissected down to the lower edge of the patella giving a good exposure of the fracture joint and the tibia extending down on either side of the joint through the tendinous expansion of the vastus muscle. All soft tissue which had fallen between the fragments was removed the edges freshened the rents in the lateral portion of the capsule repaired and the posterior edges of the fracture brought together. Mattress sutures were placed crosswise through the patella tendon above the upper fracture and carried across the tendon below the lower fracture. Delateur believes the effect of this is to take the strain from the transverse line of sutures during the recovery from the anesthetic when the great quadriceps muscle contracts. A horizontal row of sutures is placed in the anterior layer of the tendinous passage over the bone.

The plastic cast is partly removed after ten days when the patella is massaged. After three weeks the joint gets passive motion the cast is discarded at night but a posterior splint is continued while walking for at least three months. The results as reported are as follows. In 99 instances the fracture was exposed and sutured. The useful joints but with limited motion. Forty four have flexion to at least a right angle and have perfectly useful joints. The remainder have not been traced but 11 had motion to at least a degree at the time of leaving the hospital. H. B. THOMAS

D. Randall M. Amputations of the Foot (Le amputation d pied) 1. A propos de la gangrene By J. R. de Chirac

D. Randall M. with different methods of amputation practiced by French surgeons. He mentions several methods of tibial resection disarticulation that may be used in case of Lisfranc's amputation is impossible on account of lesions of the bone or injuries to the soft part. Disarticulation in front of the scaphoid and behind the scaphoid which removes the projection of the cuboid and disarticulation in front of the scaphoid and os calcis.

The result in these three operations are about the same as in Lisfranc's and do not give rise to the deformities that so frequently follow Chopart's amputation. But the tibiotarsal disarticulation has not regained in the past few years what it had previously lost. Indication for it are rare not to say exceptional it is of superior to the more mutilating operations and many authors hold that the operation that sacrifice more give stump that

can be more readily utilized in prosthesis. Operations that sacrifice a part of the posterior tarsus such as the subastragaloid and Ricard's seem more satisfactory and after them the osteoplastic operations—Le Lasquer's, Lefort's and lastly Proggoff's.

Tibiotarsal disarticulation by Olier's subperiosteal method gives very remarkable results. It is frequently indicated and often it is the only one possible. The small amount of skin demanded and the total sacrifice of the tarsus which is so often diseased or suspected of tuberculosis cause Syme's and Roux operations to be practiced more frequently than any other amputation of the foot. This tibiotarsal disarticulation gives functional results equal to those of the osteoplastic amputation of the tarsus, and not inferior to those of Ricard's and the subastragaloid operation. If the extent or the nature of the lesions cause the surgeon to hesitate it is better to select the radical operation which gives greater certainty of recovery without particularly diminishing the functional value of the result. G. LARZY

Geiger C. The Electric Drill Saw Reamer and Trephine in Bone Surgery. Surg. Gynec. & Obst. 1914, 21, 763. By Surg. Gynec. & Obst.

The author says that the old crude methods of employing theisel hammer and hand drill are unscientific procedures requiring too much valuable time and exhausting the patient. With the electric circular saw the author removes bone grafts varying from two to ten inches in length. Bone grafts cut in this manner are used in Pott's disease and ununited fractures in place of Lane plates. The grafts are usually taken from the tibia. By the use of this method there is a minimum of handling, manipulating and trauma which lessens infection in bone grafting.

Holding the motor by means of the hand piece the cable which usually conveys the power from the motor to the instrument is supplanted. The cable is always in the way and if bent at an acute angle while running it generates heat and its action is retarded. After inserting any of the interchangeable instruments the operator has a steady and absolute control of his bone work.

In mastoid and cranial work it does away with the jarring and concussion by hammering.

The complete set consists of one motor, one sterilizer, two drills, two burs, two saws with mandrels, one trephine and one cranial saw.

This instrument was tried out by Murphy during the Clinical Congress of the Surgeons of North America, November 13, 1913, and he states:

This is a first class device and by the use of this set of instruments—trephine, cranial saw, burr and drills—we simplify and modernize bone surgery also reduce the time and labor essential factors in this important branch of work. The great power and efficiency of this small instrument as a motor saw, electric drill, reamer and trephine, deserve the highest commendation of the profession.

Young T. C. *Surgery of Bones and Joints. Cal J Med M J 1914 vii 110.*

By Surg Gynec & Obst

The author gives his views in reference to the selection of fractures for open and non-operative treatment with his own and others ideas regarding the technique desirable in various cases. He also discusses briefly diseases of the knee-joint.

Believing that there is no subject in medicine of more widespread interest than that of fractures, the author gives X-ray work credit for stimulating the practitioner in careful diagnosis and treatment and Lane credit for the enormous impetus given the treatment of fractures by means of the steel plate. Young however makes a plea for common sense treatment for many fractures especially those near joints, in which cases he thinks the open operation is wholly uncalled for. He believes that ordinary surgical asepsis is not sufficient for bone surgery. Every tissue must be handled with forceps and not by the gloved hand. No sponge should be applied to the wound the second time. The skin surface should be protected by folded gauze or towels saturated with a normal salt solution and the wound closed with skin clips.

Comment is made regarding bone grafting and he believes that those who attempt it should be purely mechanical and have a complete understanding of asepsis. Diseases of the knee-joint are briefly discussed and two surgical means of treatment considered. First orthopedic, or mechanical means second pen-operative methods accompanied by orthopedic appliances. He believes that incisions into the knee-joint do not necessarily leave a stiff joint and describes the technique for open work.

II B THOM

Sexsmith G. H. *Bone and Joint Surgery. J M Soc V J 94 i 7.* By Surg Gynec & Obst

Sexsmith says bone and joint surgery has met with much criticism because of the after results of operations and the liability to legal entanglements. Too many physicians who have not had sufficient experience undertake cases which they are not fitted to treat while in abdominal surgery no one would attempt its practice without thorough training.

With our present knowledge fractures and luxations must be treated by applying proper mechanical knowledge in order to get good functional results, and not merely correction of the anatomy.

In regard to the Lane plate he says, except where it is absolutely necessary to join fragments it is generally better to use the old fashioned plant thus a discharging infection. In using plates or grafts it is better to wait 6 or 12 days so as to allow the tissues to heal thus preventing germ invasion.

In a simple fracture there is not much danger but in a compound fracture the limb is endangered. In treating compound fractures unnecessary examinations, and leaving as it is usually done should be avoided. If the wound is contaminated

with oil, it should be removed with benzine. Iodine is painted about the wound and loose bones or bruised tissue are removed with instruments. Silkworm gut or horsehair are used to suture wound edges. A 5 per cent carbolic gauze dressing is applied and not removed for 10 days. Any rise in temperature over 48 hours calls for drainage. If the stitches are removed iodine is poured into the wound and packed with gauze. If the X-ray shows bad apposition, splints or grafts may be necessary.

Sexsmith thinks that the bone-graft in non union of fractures is better than the Lane plate or nail. He has found in non union of the long bones of the leg that by the use of a leather brace and ambulation good union has resulted in from 3 to 6 months, the friction of the fragments producing osteogenic elements.

In regard to infectious arthritis he advocates the Murphy treatment, which is an aspiration of the joint followed by an injection into the cavity of a 2 per cent formalin and glycerine solution, together with Buck's extension.

For the relief of ankylosed joints he advocates the arthroplastic operation of Murphy the most important factors of which are the proper formation of the flaps, strict asepsis and careful technique.

J H SHAW

## ORTHOPEDICS IN GENERAL

Fraser J. and Roberts, H. H. *Congenital Deficiency of the Radius and a Homologous Condition in the Leg. Lancet Lond 1914, clxxxvii 606.*

By Surg Gynec & Obst

A case of each condition is reported. A study of embryology suggests that here is to be found an explanation of the condition. The hand at birth was tucked into the axilla and held in such a way that the normal rotation at the elbow was interfered with and it was strongly deviated to the radial side. The radius was represented by a thin rod occupying a position about the middle third of the ulna, which was convex inward. Correction by tibial bone transplant was proposed.

The leg showed a deficiency in the lower third of the tibia which terminated about the center in a cuplike covering of fibrocartilage. The olecranon process and a small pyramidal mass of diaphysis were present. Operation, consisting of tibial transplant was entirely successful giving a perfect result after nine months.

C E WATTS.

Gremer M. H. *Psoas Parvus Contraction. J Lancet 94, xxxi 338.* By Surg Gynec & Obst

The author reports a case of contraction of the psoas parvus muscle causing severe pain on the inner anterior and posterior sides of the leg and in the inguinal region. After various unsuccessful attempts at treatment including an exploratory incision of the tendon of the psoas parvus was found to be under great tension and was divided. Relief was immediate and permanent. This condi-

tion is comparatively new to surgery. The symptoms may simulate appendicitis, Pott's disease, sacro-iliac disease, synovitis of the hip-joint, sciatica and other diseases. W. A. CLARK

**Mauclair:** Semi Articular Grafts and Typical or Atypical Resections of the Knee for Osteosarcoma (Graft semi articulars et résections typiques ou atypiques d'un genou pour ostéosarcomes). *Arch. gén. de chir.* 1914, 11, 43.

By Journal de Chirurgie

Of recent years several surgeons have recommended conservative operations in all cases of osteosarcoma, but Mauclair has had bad results with such operations except in myeloid sarcoma. If the patient demands conservative operation he prefers resection. Osteosarcoma even of the most malignant type is a form of tumor that shows many surprises in prognosis. Jaboulay reports a case of myeloid sarcoma of the radius operated upon in 1902 which finally recovered after ten additional operations. The treatment varies depending on whether the sarcoma is of the diaphysis or the epiphysis. In the former after partial resection a fragment of the fibula or crest of the tibia may be grafted. In the latter typical resection is difficult in such cases after resection a homo- or autoplasmic graft may be made from the living subject or a corpse or an atypical resection may be performed. He reports two groups of cases: one of semi-articular grafts homo- or autoplasmic from living subjects or corpses the other of atypical resections.

**Semi-articular grafts (LEKER)** (a) In a case of myelogenous sarcoma of the upper extremity of the tibia there was a semi-articular homotransplantation of the same bone from a patient who had been operated on for senile gangrene. Good results were obtained but the patient was so obsessed with the idea of the graft that it had to be amputated. (b) In a case of central sarcoma of the upper part of the tibia a homotransplantation was done from an amputated leg. The result was good. (c) A homologous living graft was used in sarcoma of the lower third of the femur with good functional result. There was a rapid recurrence. (d) In myelogenous sarcoma of the upper extremity of the humerus a graft was made of the lower half of the femur taken from an amputated limb and fixed with a fragment of the fibula of the same limb. Good result. (e) Good results were gained in a case of myelogenous sarcoma of the lower half of the ulna by grafting the lower half of the tibia of an amputated limb.

**(KUTNER)** (1) In osteosarcoma of the upper third of the tibia a homotransplantation was made of the same bone removed from a corpse three hours after death. Good result. (2) In sarcoma of the upper extremity of the femur a graft was made of the same bone removed from a corpse 12 hours after death and preserved for 24 hours in Ringer's fluid. It was fixed with ivory chips. There was good functional result. Rapid recurrence. (3)

Graft from a corpse removed three hours after death was used in a case of chondrosarcoma of the upper extremity of the femur. At the end of seven months there was a fracture of the neck of the femur with consolidation. After extirpation of a local recurrence there was a good result.

**(PUTT)** In osteosarcoma of the upper extremity of the femur a living autoplasmic graft was made with the fibula. Death resulted from pulmonary metastasis 13 months after the operation.

**(WALTHER)** Good results followed the autotransplantation of the fibula in a case of myeloid sarcoma of the lower extremity of the radius.

**(ROVING)** In sarcoma of the internal condyle of the femur a homoplasmic graft was made of the humerus. After resection of the latter and semi-articular homotransplantation of the femur there was a good result and progressive consolidation.

**(VIANAY)** In osteosarcoma of the lower extremity of the tibia an autotransplantation was made of the fibula fixed above into the tibia below into the astragalus between the body and the internal surface. Good result.

**(MAUCLAIRE)** In a case of myeloid osteosarcoma of the lower epiphysis of the radius (1) Resection was done then autotransplantation of the fibula. March 1913. (2) A local recurrence was removed Nov. 6 1913. (3) There was removal of the fibular graft and homologous homotransplantation from an amputated arm Jan. 15 1914. Elimination of the homotransplantation. Living grafts give some good results, but there is some question as to the value of grafts from the cadaver.

**Atypical resections (MAUCLAIRE)** In a case of central myeloid sarcoma of the upper extremity of the tibia the epiphysis of the tibia was resected and the diaphysis implanted into the femur. There was good functional result after resection of the upper extremity of the fibula.

**(BRAMAN)** A case of resection of the knee and implantation of the fibula into the femur.

**(ALBERTIN)** Good results were obtained in a case of myeloid tumor of the upper extremity of the tibia by resection of the tibia and fibula and the implantation into each of the condyles of the diaphyses of the femur and tibia.

**(TILNER)** In a case of osteosarcoma of the upper extremity of the tibia resection of the femur and tibia and implantation of the fibula in the femur produced good results.

**(JABOULY)** In a case of osteosarcoma of the upper extremity of the tibia, the tibia and fibula were resected and the fibula was implanted between the two condyles of the femur. Metastasis occurred four months later.

All these conservative operations are justified only in myeloid sarcomata. In other cases it is better to perform an amputation or a disarticulation far from the new-growth. Histological examination of a fragment from the tumor is necessary in order to determine the nature of it and decide on a logical operation.

BERNARD DESPLAS.

**Altermann I Study of the Congenital Malformation of the Ankle Called Volkmann's** (Contribution à l'étude de la malformation congénitale du cou-de-pied de Volkmann) 74 *de dermat*  
Par 194. By Journal de Chirurgie

A new case of this curious disease is reported bringing the number of cases up to 13. There are two clinical types. In the most frequent one (11 cases) the lesion is bilateral and appears at birth; there is also a marked shortening of the leg and a pronounced valgus position of the foot. In the other type (2 cases) the deviation of the foot is markedly varus. All of the functional and physical symptoms are due to an abnormal bliquity of the line of the tibiotarsal articulation—normally it is horizontal. The malleolus is thickened and covered with bony projections, and its apex comes very close to the ground; the external malleolus, contrary to the normal condition is farther from the ground 5 or 6 cm or even more. The epiphysis of the tibia is sometimes bent outward forming a more or less obtuse angle with the diaphysis. The astragalus is deviated outward; its internal surface supporting almost all the weight of the body. It is not a question as Volkmann believed of a congenital outward luxation of the foot; the obliquity of the line of articulation is the essential point; the deviation of the foot being only the result of it.

As to pathogenesis Volkmann's disease must be clearly distinguished from congenital absence of the tibia or fibula for in the former radiography always shows that all the bones are present. Its duty is observed in Volkmann's disease and it may be a regressive anomaly. The cause is unknown.

The first step of the treatment consists in having the child wear an orthopedic appliance to prevent increase in the deformity. Later about the fifth year an operation should be performed. There are three methods of operation: tenotomy, osteotomy and tibiotarsal arthrodesis—the latter is the operation of choice. It has the double advantage of correcting the deviation of the foot and of immobilizing the ankle joint in the correct position. The shortening is slight and does not prevent normal functioning of the limb. L. CAPRER

**Ehrenfried A Club-Foot: A Statistical Note.**  
In *J Orth S* 194 11 N. 4  
By Surg. Gynec & Obst

The author shows by a statistical compilation some etiological factors in club-foot and other congenital deformities. His statistics cover a period of 4 years and the observation of a few hundred cases. Equinovarus is known to be three times as frequent as any other form; potential calcaneovalgus the next most common. Males are affected two to three times as often as females. Double deformities occur in over 50 per cent of cases. Over 50 per cent of single deformities are right-sided. Hereditary figures in 5 per cent and hereditary cases all have equinovarus deformities, usually double. Club-foot is three times as common

in twins as in single pregnancies. Difficult labors occur in one-fourth of all cases, premature birth in 3 per cent illegitimate in three per cent one-fifth show other congenital deformities.

Of club-foot in near relatives 5 per cent are equinovarus and 80 per cent have double deformity.  
H. W. MARRAS

**Willems Tarsectomy for Club-Foot: A New Method of Operation** (La tarsectomie pour pied bot. Un nouveau procédé opératoire) 178 *chir*  
de 1914 369. By Journal de Chirurgie

Willems prefers tarsectomy in the treatment of club-foot. It gives a shorter foot than some other methods but one that keeps its form and suppleness. There are four steps in his anatomical tarsectomy.

The first step is to reflect a flap of skin from the dorsal surface of the foot so that too much skin will not remain after the operation.

The second step is the complete resection of the astragalus by chisel and mallet.

The third step is the transverse resection of the anterior tuberosity of the os calcis. This resection should be extensive enough to give the foot a sort of balancing motion. If necessary one half or two-thirds of the anterior part of the os calcis may be removed and even in extreme cases a part or all of the cuboid and even the scaphoid.

The fourth step is the lifting and rotating outward of the anterior part of the foot which brings the cuboid or if it has been resected the head of the fifth metatarsal into the pitting between the tibia and fibula. This operation serves admirably to correct all three elements of the deformity: the equinus, the plantar inversion and especially the adduction of the anterior part of the foot. The extent of the resection may seem excessive but experience has shown that after extensive resection the remaining bones adapt themselves very rapidly to the changed topography. A veritable pseudarthrosis is formed between the surface of the tibia and fibula and the uloid. He considers this the operation of choice especially in very young infants and all forms of congenital club-foot except some rare cases of incomplete club-foot in which conservative tarsectomy will do.  
CHIFFOLAT

**Jones, R The Surgical Treatment of Infantile Paralysis** *Ch J* 194 11 353  
By Surg. Gynec & Obst

The treatment should be by rest including fixation in some cases; limit restriction of the as-  
sisted and to avoid faulty posture. When the  
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recovered.

Operative treatment should keep within the limit  
set by experience which shows that muscle stretch-  
ing causes quite serious deformity as paralysis,



and care should always be taken to keep up proper muscle tension avoiding stretching with its resulting impairment of function and relaxation producing faulty mechanical action with delayed recovery of function.

Jones emphasizes the fact that not only nerve but muscle tissue is involved in cases of drunkard's palsy which may be due to muscle-stretching with out involvement of the musculospiral nerve and the whole nerve muscle unit must be considered. These principles apply also to transplanted muscles, which must be placed in correct mechanical advantage and not made to contract against too great resistance.

He considers electricity of less advantage in treatment than massage, correct posture and exercise and cites cases in which cure followed the complete relaxation of overstretched muscles by fixing the part in position of contraction of opposing muscles thus securing diminished tension on the weakened muscle tissue which immediately showed marked trophic de-eloement.

Arthrodesis and tendon transplantation are not to be considered early in life before the patient can understand the situation for himself — and never until deformities have been corrected for at least two weeks. Such correction can be accomplished by manipulation, tenotomies, fixations and extensions and more rarely by osteotomies. Muscle transplantation is at the restoration of balance and careful study should precede operation to avoid the substitution of a new abnormal condition for an existing one. Unless a muscle is to be functional use it is useless to transplant it though its tendon may be used as a substitute in cases where it has sometimes been used by anchoring it in the perosteum as for instance in the external malleolus to correct arthrodismia.

Nerve transplantation discussed and hope expressed that better results may follow soon from our better understanding of nerve physiology particularly the work of St. Hel on the topography of the cross-section of nerve which may give better basis for the accurate suturing of fibers by impulses in the same direction. C. E. Willis.

Davis G. G. Lumbosacral Pains, from an Orthopedic Standpoint. *Therap. G. 4, xxx, 38*  
By Surg. Gynec. & Obst.

The author discusses pain and its causes in the lumbosacral region and states that while it is a desirable

thing to be able to demonstrate the origin and cause of clinical phenomena it is not always possible to do so. He states that it is a fact that there occur in certain cases, symptoms which are referred to the region of the sacro-iliac joint.

It is not evident to what extent these symptoms may be due to the involvement of the surrounding structures such as fibrous tissues and fascia and to the adjacent lumbar and lumbosacral and even hip-joints but it is probable that they are more or less interrelated.

The existence of distinct lesions having their main seat in the sacro-iliac joint has been practically accepted as a fact.

The history is given of a case which the author believes was a clear case of sacro-iliac relaxation.

He states that other cases with the pain low down in the back give no evidence of sacro-iliac relaxation but that when the complaint is localized in the region of the sacro-iliac joint for clinical purposes it is wise to consider that part affected and direct measures accordingly.

These troubles low down in the back, he states, are also caused by traumatism and cramped or unusual attitudes. In addition he states there may be a true osteo-arthritis process and a condition which he called a rheumatoid gouty arthritis diathesis as the cause of the trouble.

He considers support, fixation and rest the best remedies. Drawings of a number of different belts and appliances used in the treatment are shown.

JAMES O. WALLACE.

Biesalski K. New Apparatus (T. Chausse, Neuer gen.) *Z. orthop. f. Chir. u. Orthop. 1914*  
u. 54. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

In the after treatment of club-foot transplanted tendons etc. Biesalski makes use of a simple apparatus that can be used at home and that insures a pronating and supinating movement of the foot. It consists essentially of two plates that can be tilted by means of prongs and it can be arranged as desired for the treatment of club foot or flat foot. In fixed flat foot it is recommended that a hot-air treatment be used in conjunction with the apparatus. He describes a night splint for club foot which corrects all three pathological moments. For mild cases of pes equinus he uses a thigh splint with a shoe which can be held in dorsal flexion by a spiral spring acting on the ankle joint. DUNBAR.

## SURGERY OF THE SPINAL COLUMN AND CORD

Roth R. E. School Postures and Spinal Deformities. *Int. J. Orthop. G. 4, xxx, 5*  
By Surg. Gynec. & Obst.

Ninety per cent of the principal deformities are developed between the ages of six and twenty. Lateral curvature is rare among the uncivilized while it is common among the civilized. As the

infant progresses from the crawling to the erect posture, he develops the physiological curves of the body and at the same time develops the muscles of the back to maintain the erect posture. The uncivilized nations exercise the spine by carrying burdens on the head and also by sitting on the ground instead of on chairs. Children would

probably be benefited if they did not use chairs until they were eight years old

Of 10,066 school boys 4.1 per cent were found to be scoliotic and of 13,336 school girls, 5.8 per cent were scoliotic.

Scoliosis is always accompanied by rotation and at times is also combined with varying amounts of lordosis and kyphosis. The erect position is maintained by the opposing action of the spinal muscles. If one set of muscles is stronger than the other there will be a curve.

The school postures of sitting, standing, writing besides the school games which exercise only one side of the body are largely responsible for the prevalence of scoliosis.

The long axis of the trunk is at right angles to the axis of the hips and shoulders. If the pelvis is tilted by a short leg or from some other cause the spine will tilt to that side. The spine curves up to restore equilibrium as a result the opposite shoulder will be lowered. A similar condition may be brought about by faulty habits of standing, and also by interfering with the equilibrium of the body as in carrying schoolbooks.

In sitting the equilibrium of the body can be maintained only when the center of gravity is directly over the hip-joint axis. If the center of gravity is before or behind this point there is constant muscle effort resulting in fatigue and the assumption of faulty posture.

A foot rest at a suitable distance allowing the knee to be bent at one and one half right angles will tend to keep the pelvis up without effort. Every chair at least those for children during the time of their education and growth requires a properly constructed back to support the spine. The support of the lumbar spine relieves fatigue and prevents faulty attitude. The support should be placed to allow the center of gravity to fall just behind the hip joint axis. A seat without a back or with a badly constructed back causes round shoulders and humped back with their concomitant evils. The depth of the seat must be such as to allow of flexing the knees while the child is using the book rest.

In writing the light should come from the left. The desk top should overlap the seat so that the child may write without bending forward. The height of the desk should be such that when the child sits erect both elbows can rest over the edge. The inclination of the desk should be about thirty degrees. The writing paper should be placed obliquely on the desk, so that when the right hand is in position the right forearm will be parallel to the right and left edges of the paper. The child will then sit erect without any muscular effort there will be no twisting of the spine or advancing of the left shoulder.

A bad writing posture always predisposes to lateral curvature of the spine with marked rotation.

It is most important that educational authorities pay more attention to the fact that spinal curvatures are generally developed during school life and that they can be prevented easily.

tures are generally developed during school life and that they can be prevented easily.

ARCHER O REELEY

Leriche, R. *Technique of Laminectomy and Radicotomy from Seventeen Cases* (Sur la technique de la laminectomie et de la radicotomie d'après dix sept observations). *Lyon Chir* 19 4, 21, 407.  
By Journal de Chirurgie

After having performed 17 laminectomies Leriche thinks that operations on the nerve roots and the cord are not difficult if not done by the extradural method which causes troublesome hemorrhage. He operates under ether anesthesia after disinfection with tincture of iodine with the head slightly lowered. The exploration is made by the classical methods to which radiographic examination of the vertebrae is added when absolute precision is necessary. The incision is made just to one side of the median line as Ollier directs then he dissects the muscles with the rugue but the dissection is subperiosteal in name only.

Hemostasis is accomplished by pressure by placing tampons in the musculospinal groove. The spinous processes are then removed with the gouge forceps and the medullary canal opened either with the forceps or with the aid of a Doyen's bit. If a vein bleeds the bleeding may be stopped with the aid of a bit of muscle. Then the dura mater held with two Tuffier forceps is incised with a bistouri. Generally the arachnoid is opened at a second stage.

After the radicotomy or operation on the cord has been accomplished Leriche sutures the dura mater with small curved needles and coccatgut with sutures as near together as possible. This being finished there is a large dead space corresponding to the laminae and spinous processes that have been removed. He fills it with a muscle flap with the flesh inside against the dura mater. Then the muscles are sutured, several layers. No drainage is used. He had a mortality of 10 per cent. He finds that the results in inflammation of the nerve-roots, tabetic or not, is not stable but that in neuralgia from pressure of the roots by tumors it is excellent. In spasmodic paralysis he thinks Forster's operation is the operation of choice.

Adams, Z. B.: Causes and Treatment of Scoliosis. *Am J Orth Surg* 9 4, 11 No. 4.

By Surg. Gynec. & Obst.

Adams believes scoliosis is due to some congenital deformity of the sacrum or the fifth lumbar vertebra — as failure of fusion of a superior or inferior articular process, or pedicle of the vertebral body or overgrowth or undergrowth of bone causing tilting or rotation of the lumbosacral articulation with a resultant curving of the thoracic and lumbar regions from the effort to maintain an equilibrium upon an unstable base. Rotation of sacral segments before fusion has taken place is also given as a cause. He believes correction of deformity should be by operation.

H. W. MALFROY

Schanz A. Concerning the Treatment of Scoliosis.  
*Am. J. Orth. Surg.* 1914, 22, 570.

By Surg. Gynec. & Obst.

The author considers that the problem of scoliosis has shown itself to be the most difficult to solve of all that have ever beset our science and our art. In the history of the treatment of scoliosis there is a peculiar activity in experimenting and blunt contradictions among writers on the subject. In the discussion and classification of scoliosis it is necessary to get rid of the symptomatological viewpoint and come to the etiological.

All real scolioses show lateral curvature of the spine with principal and counter curvatures, cultivation of wedge-shaped and oblique vertebrae and torsion. The origin of real scoliosis lies in the mis proportion of the load to the strength of the weight bearing column. The torsion is explained by the fact that the overloading is felt at different points of the cross section of the column at different times.

In the treatment there are two things to be accomplished: 1. e. to restore the equilibrium of the spinal column and to restore its normal skeletal form. Gymnastics are to be used in selected cases only for there are cases in which the condition is not benefited but aggravated by this form of treatment. Patients who seem to have been originally strong and who have no pain or sensitiveness in the spine may be given gymnastic treatment without fear of harm but others should not. As a means of correction of the skeletal deformity however it is the author's conviction that gymnastics are absolutely useless.

Apparatus for support should be accompanied by some measure such as massage or exercise to prevent the atrophy of activity. For restoring the normal skeletal form mechanical apparatus is the only available means. Fundamentally any such apparatus should consist of two parts—a fixation part and an active corrective part. The older methods of portable corrective apparatus have been tried by the author and abandoned for the plaster jacket method. After eight to fourteen days he applies the plaster with the patient suspended in extension of the spine. Preparatory treatment consists of normal rectifications and stationary apparatus to make the spine mobile. no windows are cut over the

concavities nor are pads inserted to produce corrective pressure. After the removal of the jacket the patient is kept recumbent and only gradually allowed to be up with support. The results are sometimes disappointing the original deformity returning.

In the author's opinion complete correction of the scoliosis deformity is impossible. He regards the results obtained by Abbott as deformations of the thorax simulating correction and not as actual correction of the spinal deformity. He deplors the fact that the causes of the disturbed equilibrium in constitutional scoliosis are not known and therefore we do not know how to prevent or cure it. An appeal is made to pathology whence the next word must come.

W A CLARK

Sever J W: Report of the Scoliosis Clinic of the Children's Hospital Boston N Y M J  
9 4, 217 By Surg. Gynec. & Obst.

The author reports the work of the clinic for the ten years ending in June, 1913. Postural deformities and deformities of the thorax are included as well as physiological and structural scoliosis. A total of 146 cases of postural deformities such as round shoulders and hollow back, were treated with setting up exercises. The physiological scolioses were treated with daily exercises, braces and jackets being contra-indicated. The prognosis in such cases—complete cures with rotation to the concavity—was good. The total number of cases treated was 295.

The moderate types of structural scoliosis are treated with removable jackets made over corrected torsos, with or without exercises. These are worn at least two years the jackets being remade about every six weeks. The severe structural cases are treated mostly by the head suspension method.

The flexion method with application of rotary force and side pull as devised by Abbott and by Forbes, seem in the author's opinion to be distinctly wrong in principle. Results obtained by these methods have been disappointing and have no advantage over the older suspension method. In fact it has been shown by Lovett that rotation of the spine is best accomplished in extension and it has not been shown that flexion unlocks the articular processes as has been claimed.

W A CLARK.

## SURGERY OF THE NERVOUS SYSTEM

De Beule, F: Two Cases of Forster Van Gehuchten's Operation for Little's Disease (Deux cas d'opération de Förster-Van Gehuchten pour maladie de Little). *A. Soc. belges d'Ch. Brux.* 9 4, 220, 46.  
By Journal de Chirurgie.

De Beule used Van Gehuchten's modification of Förster's operation on two little girls ten years of age who had Little's disease.

In the first case the lower limbs were in hyperextension, the foot forming a direct continuation of

the axis of the leg. flexion of the hip, knee and foot was impossible. walking was totally impossible and the child could seat herself only with great difficulty. There was clonus of the knee and ankle and Babinski's sign on both sides. Operation was performed under ether anesthesia. It consisted of resection of the last dorsal and first two lumbar vertebrae incision of the dura mater and laying bare of the sensory roots. Three bundles of the root fibers were isolated and resected. The dura mater was

closed with fine catgut the muscles and skin were sutured and a large occlusive dressing applied. Recovery was uneventful. A few drops of cerebrospinal fluid were discharged the first two days. There was a marked and progressive decrease in the spasticity of the lower limbs. At present he goes to school. Her walking is not perfect there is a certain degree of spasticity and the feet turn inward. When she rises she stands at first on her toes but in a few minutes she is on her feet. Ankle clonus and Babinski's sign persist.

The second case was a mild one. Active and passive movements of the limbs could be performed spastically was shown only on walking. For the past few months there had been progressive increase in the difficulty. Ankle clonus and Babinski's sign were present. The last two dorsal and

first two lumbar vertebrae were resected three bundles of root fibers were resected on the right. On the left the fibers were lifted one by one on a blunt hook and every other one was cut. The recovery was afebrile. There was no discharge of cerebrospinal fluid. The result was perfect. The child now walks normally. There is no ankle clonus, but Babinski's sign persists.

The author gives some detail of the technique of resection. The nerve roots must be handled with great care for they are very fragile. They should never be seized with forceps which crush them but should be handled with small blunt hooks. The dura mater should be sutured with a very fine needle. The sutures placed very close together otherwise there will be escape of cerebrospinal fluid and danger of infection. J. DUNN

## MISCELLANEOUS

### CLINICAL ENTITIES - TUMORS, ULCERS, ABSCESSSES, ETC.

Rous, P. Certain Spontaneous Chicken Tumors as Manifestations of a Single Disease Spindle-Cell Sarcoma with Ruptured Blood Sinuses.

J. P. M. D. 94, 21, 50

J. Surg. Gynec. & Obst.

Recently three transplantable chicken tumors distinct in character have been described by Rous to have a filterable cause. The difference between these tumors are traceable to differences in the causative agents. Each agent gives rise to a normal type of tumor, the source from which it was isolated by filtration. The agent that gave rise to a transplantable chicken sarcoma was a mixture of sarcomatous tumors in which artificial and bone articular tissue contained minute quantities of a filterable agent. Each tumor type has characteristic phenomena as for instance the histological picture known in the laboratory of the Rockfellow Institute as chicken tumor, the sarcoma of chickens, the very attenuated spindle form in the case of the so-called mouse tumor, in other instances with sarcomatous giant cells. The source of the disease arises in the adult fowls but Rous found that the growth to be all way a spindle cell sarcoma and modification to be not great in the case observed in certain rat and mouse tumors propagated only by transplantation and dependent on the virus of a single race of cells.

Attempts to be grafted variations by injuring the filterable agent have been unsuccessful, as have attempts to make artificial epithelial Rous believes that there is good reason to suppose that other tumors of the fowl besides those already studied are caused by filterable agents. The range in structure and behavior among chicken tumors is very wide. Even when composed of cells of similar origin they like mammalian growths often exhibit a strikingly varied structure and course.

The author has found that two spontaneous chicken tumors recently transplanted have each given rise to a plasma identical in composite behavior with a tumor strain already under propagation. As shown in the present paper the spontaneous tumor known as chicken tumor No. 38 of the author series seems to be a manifestation of a disease complex already reported upon and known as chicken tumor No. 9. This latter growth is spindle cell sarcoma with a characteristic manner with blood sinuses and tending to metastasize to the muscles especially in the neighborhood of joints.

This very significant article of Rous may be briefly summarized as follows.

That chicken tumors of markedly different type have different filterable agents as their cause has been proved by experiment already reported. The present findings make it probable that this certain limits to the variety of rather numerous characters may be imputed upon a single agent. This assumption greatly simplifies the biological problem. But the truth of the assumption for the instant is less than those described in the present article can only be determined by the study and comparison in many hosts of the disease complex of which in spontaneous chicken tumors to be considered as an additional process. GEORGE E. HERTZ

Lange, L. B. Certain Spontaneous Chicken Tumors as Manifestations of a Single Disease Simple Spindle-Cell Sarcoma. J. Exp. Med. 94, 21, 577. By S. G. Gynec. & Obst.

Among the spontaneous chicken tumors which the author of this article recently studied the laboratory of the Rockfellow Institute there were two spindle cell sarcomas that yielded on transplantation neoplasms similar respectively to two strains already under propagation. The resemblance of the growths derived from chicken



tumors were placed in human plasma and incubated the fragments in a few days, were surrounded by many cells but that generally liquefaction of the medium occurred and no growth was observed. In other experiments undertaken on normal tissues the same phenomenon was observed. Therefore the authors, in this instance attempted to develop a technique which would permit them to keep human tissue in a plasmatic medium without the occurrence of liquefaction. At first they attempted to obtain a medium that would not liquefy under the influence of the tissue. The first medium made use of was human plasma and extract of human tissue taken from fresh cadavers. This, however proved unsuitable as liquefaction occurred about the fragments of tissue in 24 hours. Many modifications of the medium were tried in order to overcome these difficulties. Finally after many attempts had been made it was found that by diluting the plasma with equal parts of Ringer's solution a medium could be obtained which would not liquefy in less than 24 hours and often not in 48 and 72 hours. Usually 18 hours after the medium had been inoculated with human tissue growth appeared and increased progressively. After a period of from 24 to 96 hours the fragments of tissue were transferred to a fresh medium in which the growth continued. The medium was again modified by the addition of a small quantity of diluted extract of human tissue after which the growth became very active.

Finally after continued experiments, the authors found it possible to obtain large growths of human connective tissue. They could transfer this tissue from medium to medium. They therefore demonstrated that it was possible to keep a strain of human connective tissue in a condition of active life *in vitro* for more than two months. They believe that when a medium has been devised the composition of which is more constant human connective tissue can be cultivated *in vitro* for an indefinite period.

GEORGE C. REILLY

#### SERA, VACCINES, AND FERMENTS

Irons L. L. The Treatment of Tetanus by Antitoxin. *J Am M A* 1914, 10, 5.  
113 5 12 Gynec. & Obst

The author reports a series of 25 cases collected mainly from large hospitals in the United States and Canada. The mortality of all treated cases was 61.77 per cent while in cases without serum the mortality was 85.7 per cent. From the review of the cases the author points out the necessity of combating not only the toxin which has reached the circulation but also the toxin which has already reached the central nervous system. To remedy the first condition an immediate dose of 10 cc is given intravenously is indicated and for the second an immediate intraspinal injection will be necessary.

The conclusions that follow

1 From these statistics it appears that the mortality of tetanus treated by tetanus antitoxin is about 20 per cent lower than the average mortality of tetanus treated without serum.

2 The mortality of cases treated by efficient methods and adequate dose is considerably lower than that of cases receiving small doses subcutaneously.

The author appends the following outline for the treatment of tetanus. The prophylactic treatment by antitoxin is established. In a case where symptoms have appeared an immediate injection of 10,000 to 20,000 units of antitoxin should be given intravenously and 3,000 units intraspinal. On the following day the intraspinal injection of 3,000 units should be repeated. On the fourth or fifth day 10,000 units should be given subcutaneously to maintain the antitoxin content of the blood. In addition to this serum treatment the ordinary treatment by sedatives, methods to aid elimination and the surgical treatment of the site of the infection should be instituted.

J. H. SMITH

Falla, F. H. and Welker W. H.: Appearance of Non-Colloidal Mithydriin Reacting Substance in the Urine. *J Am M A* 94, 10, 800.

By Surg. Gynec. & Obst

The authors used the following method in testing urine. Ten ccm of urine were mixed with an equal volume of aluminum hydroxide cream and the mixture was shaken and filtered. Ten ccm of the filtrate were treated with 0.2 ccm of a one per cent mihydriin solution and heated on a Shaddock burner for exactly one minute after boiling had begun. The depth of color was observed and noted after the tubes had been standing for half an hour at room temperature. In all the samples containing albumin the filtrate from the aluminum treatment was tested by means of the heat coagulation or Heller's ring test, in order to be certain that sufficient aluminum hydroxide had been used to remove all the albumin. They reached the following conclusions.

1 The presence of non-colloidal mihydriin reacting substances in urine is of no value as a means of diagnosing pregnancy.

2 The reaction may be absent or inhibited in the urine of pregnant women as well as in normal and pathologic urine.

3 In the various urines treated the only difference noted in the mihydriin reaction between the diffusates through parchment and the filtrates from the aluminum treatment was in the intensity of colors the aluminum filtrates showing a less intense color with mihydriin.

4 In the urines reacting positively with mihydriin, the removal of colloidal substances favors the production of the blue color given by this reaction with amino-acids. Such urines before diffusion treatment with aluminum hydroxide gave a color which is not so strong and has more of a reddish cast than is the result of the dilution alone.

§ The occurrence of either albumin or indican appears to have no influence on the ninhydrin reaction applied to the colloidal free urine

EDWARD L. CORNELL

### BLOOD

Leoplasse V D The Treatment of Hemorrhagic Disease of the New Born by Direct Transfusion of Blood with a Clinical Report of Fourteen Cases. *J Am. M A* 914, 1911 566

By Surg. Gynec. & Obst.

The author reports fifteen cases of hemorrhagic disease of the new born treated by direct transfusion of blood. The results in the fifteen cases were excellent: the hemorrhages stopped at once in all of them and all recovered so far as the hemorrhages were concerned. Two babies subsequently died of syphilis.

The amount of blood transfused into the baby varies from approximately 100 ccm to 425 ccm. In performing the operation great care should be taken that the blood does not flow into the baby too fast as it would be liable to produce an acute dilatation of the heart. The donor is usually the father.

The duration of blood flow is approximately five minutes. One of the babies was practically brought back to life. Its heart could not be heard for several minutes before the blood was allowed to flow but the fresh blood started its heart again and it made an uneventful recovery.

The author draws the following conclusions:

1. Direct transfusion of blood stops the bleeding and restores the lost blood.
2. Direct transfusion of blood has cured where all other methods have failed.
3. Direct transfusion of blood should be used early but so long as there is a spark of life evident it is not too late for transfusion.

### BLOOD AND LYMPH VESSELS

Stybel W Arteriovenous Aneurysm of the Common Carotid and Internal Jugular (Aneurysma arteriovenosum der Carotis communis und jugularis interna). *D. Zentralbl. f. Chirurgie* 93

By Journal de Chirurgie

After a general discussion of the history and surgery of aneurysms the author describes a case operated on by Gebele. It was a sporadic arteriovenous aneurysm of the common carotid and internal jugular. The 35-year-old patient had catarrh of the larynx in 1900 and shortly afterward noted a small tumor in the middle of the right side of the neck. It was regarded as a gland and treated with iodine. She became emaciated and had difficulty with dyspnea, fainting, cough and difficulty breathing. Aneurysm was recognized at the München Surgical Clinic. There was a pulsating tumor apparently consisting of two parts round about the size of a dove's egg under the sternocleidomastoid. No improvement followed the application of ice and

gray salve on the contrary it grew larger. Operation was refused and she was discharged.

In 1904 the tumor began to grow rapidly and in 1905 it was operated on (Hlausner). The right common carotid was ligated and for a year there was loss of voice and continuance of symptoms but in 1907 there was return of the voice and improvement. In 1911 it grew markedly worse. Wassermann test was negative. On examination Gebele found a tumor on the right side of the neck as large as a man's fist passing upward into the submaxillary region without sharply defined boundaries and extending downward to the clavicle and to the jugular. It was a pulsating tumor fixed to the underlying tissues. The larynx and trachea were displaced to the left. The circumference of the neck over the tumor was 40 cm. There were technical difficulties in laying bare the vessels. Forty ccm of gelatine was injected subcutaneously. It was well borne and the injection was repeated. The tumor decreased 2 to 3 cm. The hereditary origin is noteworthy.

Fritz Loeb

Gilson Hermann: Arteriovenous Aneurysm of the Internal Carotid and the Internal Jugular (*Aneurysme artérioveineux de la carotide interne et de la jugulaire interne*). *J. de Ch. belge*, 94, 1911 7

By Journal de Chirurgie

The author had occasion to operate for an arteriovenous aneurysm of the internal carotid and the internal jugular in a man of 48 following a gunshot injury in the region of the left carotid. The accident was followed immediately by a serious hemorrhage due to the formation of a large hematoma; it was not until two months later that the symptoms of aneurysm appeared suddenly. A diagnosis of aneurysm of the internal jugular and internal carotid was made and confirmed on operation. The separation of the internal jugular and internal carotid was impossible on account of adhesions to each other and to the neighboring tissues so it was decided after carefully dissecting the pneumogastric and the descending branch of the hypoglossal to ligate the common carotid and the internal jugular. The orifice of communication was found. A large drain was placed; the lower part of the wound and it was united. The next day the patient had no symptoms, his temperature and pulse were normal, and he was able to read his paper in bed. The drain was removed on the fifth day, the sutures on the right and he left the hospital completely well on the twelfth.

Such aneurysms are rare and almost always of traumatic origin. The mortality is high—60% of cases—not so much on account of the difficulty of the operation but because ligation of the common carotid is often followed by fatal cerebral symptoms such as convulsions, coma and cachexia. The author tried to determine the cause of these cerebral disturbances following ligation of the common carotid. He injected the corpses of new born infants with Leichmann's fluid after having ligated the

common carotid and found that no facial or cerebral area was deprived of its blood supply. He thinks the mechanism which produces the trouble is as follows: When the common carotid is ligated the distal extremity of the ligated artery is temporarily deprived of blood. The artery, being very elastic, contracts, drives a part of the blood in it into the collaterals and then dilates. At this time in this part of the carotid negative pressure is produced. The blood reaches the circle of Willis through the basilar and posterior communicating arteries. At this moment a veritable flood of blood enters the internal carotid. When the collateral circulation is established a great quantity of blood reaches the external carotid through the superior and inferior thyroid and increases the engorgement already existing in the common carotid. This abnormal volume of circulation he thinks detaches a clot and causes fatal embolism. Embolism is the most frequent complication and generally takes place a number of hours after the ligation. More experiments should be performed to determine the truth of this hypothesis. J. DEVOY

Moorhead T. G.: Treatment of Lymphosarcoma by Benzol. *Med. Press & Co.* 94, 1, 11, 1154. B. S. Gynec. & Obst.

The author gives a preliminary report of one case of lymphosarcoma treated by benzol. The patient came to the hospital complaining of a high difficulty in breathing and a swelling on the right side of the neck. The examination showed marked swelling of a group of glands on the right side of the neck, a little smaller swelling on the left side. There was distinct dullness on percussion over the manubrium sterni and the cardiac dullness was increased. In the x-ray examination how the presence of a large opaque mass filling up the greater part of the superior mediastinum and apparently extending down on each side of the pericardium. The spleen was palpable but not tender. White cell numbered 11,200 per mm. The Wassermann test was negative.

A diagnosis of lymphosarcoma was made and it was decided to try benzol. A drachm of the drug was given at first but the dose was rapidly increased until five drachms daily were given. The x-ray exposure was given twice weekly.

The result up to the present is as follows. The glands in the neck have almost completely disappeared. The dullness over the manubrium sterni has gone and the cough and huskiness have been much lessened. The patient keeps now without trouble and in the evening feels much better. The author hopes to publish a more complete report later on. JAS. H. SWILES

Bunting, C. H.: Hodgkin's Disease. *Bull. J. Am. Med. Assn.* 94, 22, 77. By Surg. Gynec. & Obst.

Bunting's interest in Hodgkin's disease dates from a series of experiments performed in the

laboratory of Flexner at the University of Pennsylvania in 1903. His experiments at this time led him to develop a working theory as to the pathogenesis of Hodgkin's disease which he still holds, though in a modified form.

His conception of the disease was that the changes in the lymph glands were due to the filtration through them of a toxin elaborated at some primary focus of infection and were in consequence entirely of a secondary nature—an end result. In brief he believes that in Hodgkin's disease there is a primary group of glands which for a considerable length of time protects the body from the toxin elaborated by the infectious agent.

The author studied the material from twenty-eight cases of Hodgkin's disease and a study of these cases from a pathological standpoint has strengthened his conviction that the lesion of Hodgkin's disease is essentially an inflammatory nature.

In summarizing the author holds that Hodgkin's disease is an infectious disease due to a diphtheroid organism the bacterium *Hodgkins*. A primary lesion may often be found at the portal of entry. While in some cases the organisms may remain for a long time localized in the vicinity of the portal of entry in other cases they early gain entrance into the general circulation and may be widely distributed. The organism and its toxin show a special affinity for lymphoid tissue and produce in this characteristic changes in Hodgkin's disease changing somewhat according to the intensity of the toxin, the resulting ultimately in the sclerosis of the glands. There is at the same time an interglandular inflammatory process at times very acute but it is finally in a dense sclerotic tissue. There are also characteristic blood changes in the disease.

The glandular changes can then be considered only as the result of a toxic action and contribute to the patient's death mainly incidentally when certain gland groups react and are enlarged. The cells of the enlarged glands though atypical show none of the antagonism to the other body cell characteristic of malignant neoplasms.

GEORGE E. BEILBY

Bunting, C. H.: The Blood Picture in Hodgkin's Disease. *Bull. J. Am. Med. Assn.* 94, 22, 77. By Surg. Gynec. & Obst.

Bunting has been able to study the blood picture in twenty-five cases of Hodgkin's disease in which the diagnosis had been established by the histological examination of a test gland. The study of the blood in these cases has shown that there is a deviation from the normal leukocytic picture in all cases. In them there is not a single constant picture and in them last at it is possible to divide the cases into two distinct groups according to the differential count of the leukocytes.

The first group including cases of a year or less duration, shows a normal or slightly increased total leukocyte count with a normal or decreased percentage of polymorphonuclear leukocytes.





This inhibition of karyokinesis is the characteristic reaction of the cell to a certain moderate dosage of rays, which is different for each kind of cell. A smaller dose stimulates karyokinesis, a larger one not only inhibits it but kills the cell directly. This law explains only the most noteworthy phenomena of latency and does not hold good for the reaction of all cells to the rays. In some kinds of cells there is no latent period; for example, the nuclei of lymphocytes are destroyed almost immediately after irradiation and the reaction begins at the same time whatever the dosage. The differences in the sensitivity of tumor cells to the rays is explained if we go back to the tissues from which the tumors originated and determine their quantitative and qualitative differences with regard to the action of rays.

K. HARTUNG.

Halban J.: Protective Effect of Radium Emanations on the Secondary Sexual Characters of Tritons (*Protokoll der Sitzung der Reichsversammlung der Wissenschaften zu Berlin, 1914, 22. u. 23. April*). *Z. f. Naturf. u. Physik* 1914, 22, 11, 466. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Gynäkol.

Small doses of radium and roentgen rays have a stimulating effect hastening the germination of sperm in certain species causing parthenogenesis of unfertilized eggs, increased activity in the development of the endoderm in fertilized herring eggs etc. Larger doses have an inhibitory effect inhibiting the growth of fertilized ova of *Bufo viridis* and Triton alpestris and killing growing mice and other plant and animal organisms. Radium moreover has a protective effect on the secondary sexual characters; for example in male Tritons the crest which develops in these animals at rutting time develops to a much greater degree when the animals are kept in vessels and subjected to the action of a certain quantity of radium emanation. This crest can also be developed in male Tritons shortly before and after the rutting period. In female Tritons symptoms of rutting can be developed a long time before the rutting period, the yellow stripes on the back increase in size and become deeper in color. It is not yet decided whether the emanations act directly on the sexual characters or whether they stimulate the sexual glands to greater activity and that this acts secondarily on the sexual characters.

J. HALBAN.

Hartung, A.: X Ray Findings in the Normal Stomach. *Surf. Gynec. & Obst.* 1914, xvii, 757. By *Surf. Gynec. & Obst.*

After briefly mentioning the technique used in making roentgenologic examinations of the stomach the author describes that organ as it appears at rest and in motion in apparently normal individuals. Due allowance being made for individual variations, such stomachs conform in shape either to the fish hook or the cow horn type first described by Rieder and Holzknecht respectively. Schleusner who classifies stomachs on the basis of their muscle tonus calls the latter the hypertonic type and divides the other into orthotonic, hypotonic, and atonic types.

The position which the normal stomach occupies is essentially vertical or oblique although here also outside influences may induce marked variations. Size determinations are of little value except insofar as it is possible to be able to ascertain how the stomach acts if definite amounts of the opaque meal are ingested. Normally the stomach walls adapt themselves closely around its contents.

Attention is called to the multiplicity of names applied by different authors to the same parts of the stomach and a greater uniformity of nomenclature is urged based preferably on the anatomic divisions by Forssell. The stomach is described during the process of filling, mixing of its contents, and emptying. Mention is made of the peristaltic and punction action concerned in this process.

Sellheim H.: Irradiation of Tumors (Strahlenbehandlung von Geschwülsten). *Deutsche med. Wochenschr.* 1914, 4, 22. By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Gynäkol.

This is a propaganda for the procuring of radium, in which the author reports the effect of roentgen and radium rays on living and tissues both the superficial and deep effect. He gives the differences in penetrability of the different kinds of rays, the roentgen and gamma radium rays, and the effect of metal filters the different degrees of sensitiveness of normal and pathological tissues, showing the destructive effect on the genital glands and tumors. He also describes the arrangement for concentrating the action of the rays on the diseased focus without injuring the surrounding healthy tissue — sensitization and secondary rays.

DOUGLASS

# GYNECOLOGY

## UTERUS

Cobb, F: Cancer of the Uterus. *Bast M & S J*  
1914, citx 861 By Surg Gynec & Obst.

The author summarizes the value of the paper as follows:

1 It gives a complete analysis from the stand point of end results of all the cases of cancer of the uterus at the Massachusetts General Hospital for fourteen years, from 1900 to 1913 inclusive 367 in number of which 70 were my own personal cases.

2 It emphasizes the importance of early diagnosis of cancer of the cervix and distinctly shows the possibility of cure by the extended abdominal (Wertheim) operation, and describes certain original methods of operating which are of importance.

The need of awakening the public to the fact that irregular bleeding at any time in a woman's life may mean cancer of the cervix or uterus and should be investigated is shown by an analysis of the 367 cases reported of which 230 63.8 per cent came too late for a radical operation. In Wertheim's statistics, 50 per cent were inoperable. The ignorance of the laity as to the nature of the disease, the insidious onset, the neglect of medical men to examine their cases or their inability to recognize the importance of conditions found are responsible for this high mortality.

Irregular bleeding is the most common early symptom, pain is a late symptom. One year was the average duration of symptoms of the 230 inoperable cases. Seven to eight months was the average duration of life in the cases not operated, thirteen months in cases in which a palliative operation was performed. Palliative operation is strongly recommended to relieve pain and hemorrhage and prolong life. Curettage and the cautery are most useful with the local application of acetone or formalin between curettings. Radium may be tried and general tonic treatment and the use of opium as indicated.

The author had good results in eight cases in which he supplemented the curetting and cauterization by opening the abdomen and ligating the internal iliac arteries, the relief from pain and hemorrhage was remarkable. Both internal iliac arteries are tied with silk and the abdomen closed without drainage and by thus stopping the blood supply the malignant growth is starved and pain and hemorrhage relieved.

In determining which cases should be operated upon the necessity of an exploratory laparotomy is indicated. If it is decided not to do a radical operation the palliative operation of tying the internal iliac arteries can then be done. The general

condition of the patient must be considered. A long tedious operation should not be done in a feeble subject nor in an extremely obese patient. In the latter cases a vaginal hysterectomy is advised. The possibility of determining the operability of a patient without opening the abdomen to explore is considered very difficult.

Wertheim's report in 1912 showed he had done the radical operation 675 times, 380 were done over five years previously, 160 of which were cured over 4 per cent.

In the author's series 17 vaginal hysterectomies were performed with no immediate mortality. Fourteen of these were done over five years previous, eight of which were traced with two cures, 25 per cent. As to per cent of cures is the average in vaginal hysterectomy it is advised only for cases in poor condition or cases obtained very early in the course of the disease.

Abdominal hysterectomy for cancer of the fundus was performed 27 times with an immediate mortality of 4. Fourteen cases done five years or more previous were traced showing six cures, 43.8 per cent.

Abdominal hysterectomy for cancer of the cervix was done in 89 cases, simple hysterectomy 49 times and radical hysterectomy 40 times. By radical hysterectomy is meant the removal of the uterus and a liberal portion of the vagina through a median abdominal incision with thorough dissection of the ureters and bladder and the removal of as much of the parametrium as possible, the regional lymph glands being removed only if palpably enlarged. A plea is made to have cancer cases treated only by specially trained men to whom this radical operation is familiar. It is believed that a much greater percentage of cures could be obtained by men specializing in cancer cases. In the 49 simple hysterectomies the immediate mortality was 17 or 34.6 per cent. Of the 26 traced cases 5 were cured, 19 per cent. In the 40 radical hysterectomies there was an immediate mortality of 9 or 22.5 per cent. Of the surviving 31 cases 14 had been operated on over five years ago and 7 were cured, 50 per cent. Septic peritonitis and shock were the most frequent causes of death in the abdominal hysterectomies.

The important factors in the radical operation are:

- 1 The preliminary preparation
- 2 The anesthetic with special reference to the prevention of shock
- 3 The abdominal incision
- 4 The freeing and handling of the ureters
- 5 Removal of the parametrium and glands
- 6 Control of hemorrhage



Combined treatment with radium and roentgen rays hastens the beginning of the reaction without having any effect on its severity which depends more on the extent of the process. The weight generally decreases in the beginning of the treatment in some cases the decrease persists in others the weight gradually returns to normal. Blood examination does not give a uniform result. The local changes vary. Ordinarily the discharge is at first increased and becomes seropurulent. The odor disappears and the hemorrhage stops usually after three to four weeks. The tumor contracts, the ulcers become clean and covered over with a fibrous layer and stenosis takes place in the vagina around the ulcerations. Infiltrations disappear and solid bands take their place. Four detailed case histories are given with the microscopic findings before and after irradiation.

From his experience the author comes to the following conclusions:

In inoperable cancer of the uterus in recurrences and in cases that are not very far advanced sufficiently intense combined treatment with filter radium and roentgen rays produces marked improvement or even clinical recovery with the disappearance of all symptoms. Such improvement has never before been obtained with any kind of conservative local treatment. Cancer cells are undoubtedly destroyed by a sufficient dosage of rays. In two cases the destruction of cancer cells was microscopically demonstrated to a depth of 1 cm. Deeper layers were not examined and the author therefore expresses no opinion in regard to them. The permanent result cannot be reported as the time too short—94 days and 54 days.

J. P. T. F.

Ishim W. Effect of Radium Mesothorium Treatment on Cancer of the Cervix (Über den Einfluss Radium Mesothoriumbestrahlung für das Carcinom). *Monatsh. f. Geb. u. Gyn.* 94, ix, 79.

By Zentralblatt f. d. Ges. Gynak. u. Geburtsh. d. Grenzgeb.

The author mentions that the results of irradiation are due to the action of the rays, supplemented by bactericidal fermentation destroying the tumor tissue by phagocytosis and it is then caused by the blood stream. The author comes to the conclusion from the exact observation and material from carcinoma of the cervix treated with radium, with 4,000 milligram hours of mesothorium, 5 milligram hours of radium. It is interesting to note the histological examination showed the changes which led to the conclusion. The changes which have an atrophic effect were described as follows: (1) through phagocytosis as Metchnikoff and his students have shown. (2) phagocytosis plays a part in the destruction of normal organs. (3) the transformation of many animals. (4) the transformation of the cellular and glandular and the disappearance of the tubular ducts. It is not really possible that

carcinoma metastases may be influenced in this way. This hypothesis having been recognized the dosage should be regulated in accordance with it and the phagocytic properties of the blood stimulated in every way by the injection of autolysins, blood serum. The same principles must be followed as those generally recognized in immunization against infections. If metastases have occurred or marked cachexia, small or moderate doses should be given at first in order not to overburden the reactive capacity of the body and thus bring about the opposite condition to the one intended.

K. HOFM.

Schickels G.: Clinical and Topographical Anatomical Study of Myoma of the Cervix, with Remarks on The Operative Removal. (Klinische und topographisch anatomische Studie über Cervixmyome nebst Bemerkungen über ihre Operation.) *Einfernung.* *Ztsch. f. Geb. u. Gyn.* 1914, lxxvi, 68.

By Zentralblatt f. d. Ges. Gynak. u. Geburtsh. d. Grenzgeb.

The author tries to make clear by a series of cases the localization of growth and relations of myoma of the cervix to neighboring organs and to draw practical conclusions in regard to operation from these facts.

Large myomata of the posterior wall of the cervix lead to obliteration of the posterior lip of the os and to typical displacements of the uterine artery outward and of the bladder and body of the uterus upward. The ureters are generally placed outward or downward and not lifted upward. The latter is only exceptionally the case if the primary seat of the tumor is beneath the ureter and there is pronounced growth of it into the parametrium or if there is a secondary nodule on the primary tumor that grows into the parametrium. Ordinarily these myomata grow uniformly in all directions. Similar conditions are found in myomata of the anterior wall as in conglomerations of myomata proceeding from the anterior or posterior wall.

The topographical displacements of the neighboring organs are more complicated in multiple myomatous nodules separated from one another. Here there is generally displacement of the ureters upward. Also the fundal bulge of the ligament and the adnexa are displaced upward as well as the sigmoid flexure. These displacements however can always be explained by the original position of the tumor and the direction of its growth. Therefore it becomes necessary if possible before the operation or at any rate at the beginning of it to determine the topographical relations. This can be partly accomplished by external and combined examination best by transverse incision of the anterior peritoneum and examination of the tumor complex from before backward. This gives a certain typical method of operation, the most essential point of which is the early exposure of the anterior wall of the cervix and incision of the vagina leads to the growth of the tumor. Schickels comes to the conclusion that in

general it takes place equally on all sides and in a straight line but it may show an unsymmetrical growth which is not dependent entirely on the resistance of the neighboring parts, but is influenced by the contractility of the uterine musculature

SCHWEDLER

Beckmann W Study of Heterologous Mesodermic New-Growths of the Cervix (Zur Kenntnis der heterologen mesodermalen Neubildungen des Gebärmutterhalses) *Ztschr f Gebn isk u. Gy sk* 1914 LXV 566

By Zentralbl f d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A 22 year-old nullipara with a bilateral catarrh of the apices had had a white discharge for 3 months and at the last there had been an almost continuous bloody discharge. The vagina filled with a soft polypous tumor as large as a fist originating in the cervical canal. The cervix and internal os admitted the finger, the cavity of the uterus was not increased in size and was free from tumor. There was thickening and lengthening of the anterior lip of the os from whose surface arose another tumor as large as an egg. There was also a tumor of the posterior lip which extended into the posterior vault of the vagina. The parametrium on both sides was infiltrated. Under lumbar anesthesia the tumor was removed with the finger a sharp curette and scissors. The cervical cavity was cauterized but radical operation was not undertaken on account of advanced cachexia infiltration of the parametrium and suspicion of sarcomatous metastases in the lungs. Three weeks later there was recurrence after 4 more weeks there was involvement of inguinal glands and a large tumor reaching to the umbilicus and extending out of the introitus vagina was again removed with the finger and scissors. Cauterization was followed soon by death. The diagnosis was sarcoma of the cervix and left ovary.

A detailed microscopical description of the tumor is given and it is compared with others described by other authors. The tumor was of embryonic tissue from the mesoderm which by unlimited proliferation of cells formed a sarcoma. The etiology and course of heterologous cervical sarcoma are discussed.

MORALLER.

Bentlin W Etiology of Myoma of the Uterus (Zur Ätiologie der Uterusmyome) *M. natschr f. Geburtsh. u. Gynäk.* 1914 LXV 50

By Zentralbl. f. d. ges. Gynäk. Geburtsh. s. d. Grenzgeb.

In reply to Freund's suggestion that defective development in general and of the genitalia in particular is responsible for the development of fibromyomata, two cases are published in both of which there were multiple myomata of a bipartite uterus in one case there was also a septum of the vagina and in both cases, double fibroids. A statistical study of the Königberger material, however, shows that these are the only cases of anomaly of the uterus in 912 uteri removed for myoma and also the only instances in which myoma developed

among the 24 cases of duplication in the genitalia. Genital anomalies, therefore, can hardly be considered seriously as a cause of fibromyoma. MOOS

Mahler J: "Myoma Heart" and Deep Irradiation ('Myomern und Tiefentherapie') *Mot. Kh. Berl.* 1914, x 588.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author believes that the pathological changes in the heart found on autopsy of women with myomata are the total result of the injury caused by hemorrhages and the change in ovarian function. According to his experience the first heart symptoms observed in myoma cases are functional disturbances to which symptoms of hypertrophy and dilatation are added later. The cause of these symptoms is probably abnormal innervation due to changes in the tonus of the autonomous and vegetative nervous systems.

In 11 cases of myoma with heart symptoms and demonstrable changes in the heart the author got marked improvement by the use of roentgen rays. The subjective symptoms disappeared first, and later the objective ones the most important change being a retrogression of the dilatation. Results were obtained in three cases in which there was a beginning lack of compensation. Heart changes and anemia do not constitute a contra-indication to irradiation of the myoma. In one case a marked fall was observed in the high blood pressure. Five cases of climated hemorrhage were also favorably affected by deep irradiation. The most favorable effect of the irradiation is due to the fact that the ovarian secretion which has been changed in quality is either done away with or brought back to normal. The technique of the irradiation is described.

DOXA.

Broughton Alcock, W Treatment of a Uterine Abscess by Sensitized Bacilli *Protet. Brk. M. J.* 1914, I: 24

By Surg. Gynec. & Obst.

The author reports the treatment of an abscess which drained through the cervical stump following a subtotal hysterectomy for fibroma. A culture showed a pure culture of bacillus proteus. The patient was given daily vaginal douches, and, at intervals of three or four days, seven injections of a culture of the bacilli derived from the pus. One hundred millions were given the first injection and two thousand million the last. The bacilli were heated to 60° an hour before administration.

On the eighth day after the last injection of these dead bacilli 50 ccm of blood was taken from the patient and used for the preparation of an autogenous vaccine consisting of living bacilli sensitized by contact with the serum of the patient's blood, which was rich in amboceptor and specific agglutinating qualities.

On the tenth day after the last injection of dead bacilli, injection of the sensitized autogenous vaccine was commenced one injection being given weekly for four weeks, and the dose increased from four

hundred million at the first to one thousand million at the end. Very slight reactions followed the injections. At the same time the abscess was washed out with a dilute antiseptic solution. Although there was no evidence of pus after the fourth injection, four subsequent injections were given. After six months there has been no evidence of the infection. C. H. Davis

Miller J. W.: Corpus Luteum Menstruation and Pregnancy (Corpus luteum, Menstruation und Gravidität). *A. d. f. G. d. 914 c. 368*  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

There is a fixed relation of dependence between ovulation and menstruation and the rupture of the follicle precedes the menstrual discharge by about 9 days. The corpus luteum is epithelial in nature. This hypothesis is supported by the history of development and the appearance of colloid drops. In the development of the corpus luteum there is first an increase in the theca interna by the deposition of fat and then an increase in the granulosa cells by mitotic division. After the rupture of the follicle the granulosa cells are transformed into lutein cells by taking up lipid combinations and yellow coloring matter then follows vascularization and immigration of connective tissue then retrogression. At this period neutral fat can first be demonstrated.

The corpus luteum of pregnancy is distinguished from that of menstruation by the almost complete absence of the fat reaction, colloid degeneration and deposition of calcium. The corpus luteum causes the cyclic change in the endometrium and the decidua and makes the implantation of the ovum possible.

In connection with Fraenkel's experiments a case is reported in which after the beginning of pregnancy the corpus luteum was removed and retrogression of the uterus took place without abortion after the type of the absorption of the egg-chamber in rabbits. Lactation atrophy is not a reflex trophic but the result of the withdrawal of the corpus luteum. The toxemias of pregnancy may possibly be due to hypofunction of this organ. Among 40 to 50 ovaries removed by operation the corpus luteum was lacking in one case of eclampsia. In another case of eclampsia there was a cyst in the center of the corpus luteum. Nothing could be seen of the normal epithelium. An internal secretion cannot be demonstrated in it by the complement fixation method for the hormones do not cause the formation of antibodies. Experiments with vital staining have as yet had no results. Menstruation is only an unburdening of the hyperæmic uterus. Ruting and menstruation are different phenomena. The menstrual blood is possibly a nutrient fluid for the ovum. The tenth day before the beginning of the new period is the most suitable time for artificial impregnation. Only the ovum of the first missed period is implanted. The duration of pregnancy should be reduced 19 days. BARNES

Driesen L. F.: Endometritis, Resulting from Abnormal Menstruation and Causing Profuse Hemorrhage (Endometritis folge abnormaler Menstruation, Ursache profuser Blutungen). *Zentralbl. f. G. d. 914, xxxviii, 68*  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Driesen examined a series of women some of them totally and some of them probably sterile and discovered a peculiar kind of endometritis which he called incomplete post menstrual necrotic endometritis the clinical symptom of which was profuse hemorrhage microscopically it was manifested by necrosis hyaline degeneration in filtration with multinuclear leucocytes dilatation of the vessels cystic dilation of the glands proliferation of epithelium and deficient glycogen also by signs of incomplete regeneration of the mucous membrane such as are found in endometritis following abortion. The explanation is as follows.

In the normal course of menstruation the mucous membrane is cast off and a new one formed but if ovulation or menstruation does not take place normally, the casting off of the mucous membrane may not be complete and the remaining necrotic particles cause an incomplete regeneration of the mucous membrane as do the remnants of an abortion or of the decidua. Recovery can only take place after the removal of these remnants. If in spite of this procedure the abnormal casting off and regeneration of the mucous membrane recurs the only thing to be done is to castrate by operation or better still by irradiation. BARNES

Vautrin Th.: Treatment of Inversion of the Uterus Should Be Conservative (La cure de l'inversion utérine doit être conservatrice). *Rev. prat. d'obst. et de gynéc. Par. 1914, 78*  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The most unusual form of inversion is the idiopathic in old women its treatment should always be surgical. The partial or complete inversions caused by tumors should be treated conservatively by removal of the cause except in cases of malignant tumors when hysterectomy is indicated. Puerperal inversion should be treated at once by reposition with the hand pessary or colpeuryter. In chronic forms if these mild measures fail anterior or posterior colpo hysterotomy should be performed. Vautrin prefers long incisions to the fundus to the shorter ones, and the posterior to the anterior and does not use the abdominal route. BARNES

Cuthbertson W.: An Improved Gillens Operation for Uterine Displacements. *S. & G. 914 xvii, 751*  
By Surg. Gynec. & Obst.

The Alexander operation was formerly one of the most widely used in the correction of uterine displacements, but was applicable only to those cases which were free from adhesions and infections and those in which the uterus could be drawn forward. Any operations which involve the use of the broad ligament are wrong in mechanical principle and it

would seem that the round ligaments are the most useful structures for correcting these displacements by drawing the uterus upward and forward the only objection to their use being their tendency to pull out of the new anchorage.

The first step in the new operation is to make a Pfannenstiel incision across the lower abdomen and enter the peritoneal cavity through a small median vertical incision.

The round ligaments are then drawn through the anterior abdominal wall, as in the Pfannenstiel operation. With a wispel a strip of fascia from the external oblique is pulled up to a point above where the ligament emerges from the wall of the abdomen. This strip of fascia is then seized by a forceps passed between the two arms of the loop of the ligament and drawn down into place and sutured. This strip of fascia holds the ligaments permanently in their new position. Cuthbertson has performed this operation on fifteen women in the past two years. Twelve of them have been kept under observation and have had two successful deliveries, two of them having passed through normal labor since the operation.

Ecker: Prolapse and Rupture of the Uterus (Prolaps und Ruptur uteri) *Monatsh. f. Geburtsh. u. Gynäk.* 1914, 23, 555.  
By Zentralbl. f. Gynäk. u. Geburtsh. u. Gynäk.

The patient was a para whose previous deliveries had been normal. When the uterus was dilated to the size of a lemon, the patient was delivered. The child was born at 35 weeks gestation and was given a cesarean section. Strong contractions followed and after two hours there was sudden pain and severe pain in the abdomen. The woman was brought to the hospital moribund. The uterus was ruptured and the child which is in the abdominal cavity was a tract. Laparotomy showed that the uterus was completely ruptured. Suturing and tamponade were hastily done but without success. The patient showed marked general contraction. The child was full term. In the early days the uterus must have been very small. The rupture occurred and the rupture but use of the disproportion between the size of the head and that of the pelvis.

R. M.

Halm: Prophylaxis of General Peritonitis in Operations on the True Pelvis, Especially in the Radical Abdominal Total Excision of the Uterus for Carcinoma (*Prophylaxe der allgemeinen Peritonitis bei Operationen im kleinen Becken insbesondere bei der totalen abdominalen Exzision des Uterus wegen Carcinoms*). *Zentralbl. f. Gynäk.* 1914, 23, 47.  
By Zentralbl. f. Gynäk. u. Geburtsh. u. Gynäk.

Surgeons have found that the peritoneum of the true pelvis has slight capacity for absorbing septic products and tends itself more readily to discharge. Therefore, in three cases of operation for carcinoma of the uterus, at the time of the operation the uterus after sufficiently paralyzing the connective tissue

surfaces, shut off the abdominal cavity from the pelvis with a septum formed as follows. The cervix and the sigmoid flexure were sutured to each other and to the anterior and posterior parietal peritoneum by utilizing the different mesenteric folds of the cervix and the appendix and the appendix epiploica of the flexure. The procedure is technically easy and does not materially prolong the operation. All three were recovered and are in remarkably good condition after the operation.

GRACEY, JR.

Villechaise: Total Abdominal Hysterectomy by Anterior Section of the Cervix (*L'hystérectomie totale par section antérieure*). *Thèse de Médecine* 1914, 117, *J. de Chir.*

At present most surgeons regard this method as an exceptional one. The author following Ricard and Martel proposes to make it a general method. He emphasizes certain technical details borrowed from Martel which facilitate the procedure: viz. clamping of the round ligaments and dissecting off the anterior peritoneum of the bladder before section of the uterus, and preventive clamping of the uterine arteries after deep exploration of the posterior fold of the broad ligament with the finger. This is not always possible particularly when there are posterior adhesions or a large suppurative salpingitis adherent to the broad ligament.

The technique when en bloc affected uterine salpingitis is to remove them below and, as a last resort, to inflame the adnexa, but to remove the broad ligament and to lateral and posterior fibromata of the uterus. The greatest complaint to be made against the operation is that the primary section of the cervix of the uterine cavity at the beginning of the operation which is an offense against asepsis. This objection does not hold in cases of salpingitis that are septic but does hold in fibroids.

J. CHAMBERLAIN.

Mashoff: On Sudden Relaxation of the Uterus in Curettage (*Über die plötzliche Erschlaffung des Uterus bei Kürettage*). *Arch. f. Gynäk.* 1914, 23, 519.  
By Zentralbl. f. Gynäk. u. Geburtsh. u. Gynäk.

The author reports four cases of his own and discusses the clinical picture of sudden relaxation of the uterus which was authentically demonstrated by Beutner, 1904. The course in all four cases was normal. The curettage was done without anesthesia. The wall of the uterus which had been offering resistance suddenly was no longer palpable but became so again after a douching with a hot iodine solution. None of the women felt the sudden relaxation objectively nor showed any symptoms such as collapse, change in pulse or respiration. The possibility of perforation was excluded.

Prerequisites for sudden relaxation are: subinvolution, hypoplasia, anemia, and degenerative changes in the uterine wall. The real cause is organic or functional insufficiency of the uterus.



muscles. The mechanism of the sudden dilatation is not yet clear. Neither the introduction of a foreign body nor stimulation of the uterine ganglia can be held to be the cause especially when the rarity of the condition is considered. It is certain that the sudden relaxation is caused by a mechanical stimulation and that it is dependent on the condition of the uterine musculature which may be insufficient in which case it is more quickly exhausted. The result is a temporary loss of the capacity for contraction. There may be difficulty in making a differential diagnosis from perforation but this can be made in a measure from the contractions that begin again after the relaxation. When the relaxation takes place all instruments should be immediately removed from the uterus as contraction may take place and cause a perforation. WÄRBER

Fuchs, J. Experimental Study of the Effect of Expressed Juices and Extracts from the Thyroid Ovary and Placenta on the Rabbit's Uterus In Vitro (E perme talle Untersuchungen über die Wirkung von Presssaften und Extrakten aus Schilddrüse Eierstock und Placenta auf den belebenden Kaninchen uterus) *Ztschr f Geburtsh u Gynäk* 1914 *lxz* 633  
By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

Fuchs made experiments *in vitro* on the uterus of rabbits that had been pregnant. The expressed juices were prepared as follows. The organ was macerated in meat-cutting machine ground in a mortar and expressed with the Buchner press. In some of the cases the organ was previously washed out in distilled water in others the juice was first hemolyzed and then centrifuged. Extracts were prepared with physiological salt solution 1 part substance to 9 parts salt solution and in some of the cases 12 per cent of the volume of 90 per cent carbolic acid was added.

Mersch's ovarian extract and Knoll's ovaraden were also tested. The results were as follows: (1) The greater part of the fluids were without much effect. (2) the expressed juice from the thyroid had a stimulating effect. (3) expressed juices and extracts from ovaries generally had an inhibitory effect. (4) expressed juice and extracts from placenta generally had an inhibitory effect. (5) extracts from all the organs with carbolic acid added always had an inhibitory effect which was to be ascribed to the carbolic acid content. ZOLFFRUIT

#### ADNEXAL AND PERIUTERINE CONDITIONS

Meyer R. Pathological Anatomy of the Ovary Oophoritis (Best age pathologischen Anatomie des Ovariums Oophoritis) *Ztschr f Geburtsh u Gynäk* 1914 *lxz* 61

By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb  
A case of cut follicular oophoritis after septicoemia is described in which the follicle and its immediate surroundings are almost exclusively affected. Important points in the diagnosis of chronic oophoritis are infiltration granulation tis-

sue and abscesses also besides perioophoritic changes the presence of oedematous circumscribed parts with rarefaction of the tissue and loss of the parenchyma with sclerotic scars. Demonstration of advanced degrees of epithelial proliferation under and in the adhesions of the ovaries especially in adhesions with the tubes. Solitary abscesses arise from infection of the corpus luteum at the point of rupture from the perioophoritis. It is impossible to make a diagnosis of a given abscess as a corpus luteum abscess because the luteal cells are immediately destroyed. The ovarian abscess heals by the abscess cavity becoming lined with epithelium from the surface of the ovary or the fimbria. The cavities are then closed off as cysts. Pseudoxanthoma cells appear under the epithelium with other remnants of the inflammatory process.

MORALLFR

Cattaneo, D. Structure of the Ovaries in Mammals (Ricerche sulla struttura dell'ovario dei mammiferi) *Ist nat d embr* 1914 *xx*

By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

Nearly twenty different methods are described. Golgi's, Fananas, Verratti's, Kopsch's, Benda's and others and Cattaneo himself studied the endoplasmic structure of the ovary cells and especially the cells of the ovum. He got the best results with the ovaries of different kinds of bats but also examined those of various kinds of mammals, up to man.

He comes to the conclusion that Golgi network is a constant constituent of the ovum cells with a characteristic arrangement which is subjected to certain changes in the course of development and which is to be regarded as an important part of the cellular structure. The network is found even in the undifferentiated germinal cells of the Valentinian germinules. The structure and position change during development until finally when the oocyte has nearly finished its growth it lies in the cortical zone.

The findings and questions in regard to the mitochondria are very complicated these have long been known and described but they are extraordinarily unconstant and unspecific in their morphological and microchemical characteristics and there are many not very well founded hypotheses as to their physiological function. Renault considers them elective organs for extracting secretions. Whether they are organs of excretion. The author could not confirm the findings of some authors who believe that the mitochondria are directly transformed into yolk in maternal. WEISSER

Bucura, C. J. Theory of the Internal Secretion of the Ovary (Z. Theorie der inneren Sekretion des Eierstocks) *Zentralbl f Gynäk* 1913 *lxz* 830

By Zentralbl f d ges Gynäk u Geburtsh d Grenzgeb

Bucura tries to show that the corpus luteum is to be regarded as the histological continuation of the

follicle, which has discharged its ovum and that it forms hormones that have the same effect as those of the intact follicle which he regards as the only source of the internal secretion of the ovary. This theory may hold true for man but in many species of animals it cannot be denied that the interstitial glands have an internal secretory function. These cells, which are formed of stroma cells and again become stroma cells, and in distinction from the granulosa lutein cells are connected tissue in nature he regards as cells which are only changed morphologically by the assimilation and storing of hormones and physiologically are only passive storehouses for hormones. "Ovary and internal myometrial ductless gland" is also probably only a place where ovarian hormones are stored. Hucura also believes that the luteal and follicular must have the same hormone effect as the follicle as they are descendants of it. This theory would answer with the necessity of assuming a special internal secretory part of the ovary. *Illustration.*

Hucura, L.: Golgi's Network in the Cells of the Ovary (Der Netzapparat in den Zellen der Eierstöcke). *Archiv für mikroskopische Anatomie* 1914, 14, 146, 148.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author used for his work the ovaries of cats, dogs, rabbits, guinea pigs, white rats, and hedgehogs. He used Golgi's method of silver staining and followed Riquarts' directions, which are described. The findings as to the network in the interstitial tissue given in detail with cover illustrations. The results are as follows: The network is found in the germinal epithelium and in the cells originating from it in the young animals in the follicular epithelium, and in the cells of the corpus luteum. It is lacking or at least cannot be demonstrated in the ovum cells of the granulosa follicle. In the rat and mole cells it is present during metamorphosis and causes characteristic changes in form and position. *Illustration.*

Lucasewicz, H.: Physiological and Therapeutic Study of Lipoids of the Ovary and Corpus Luteum Stimulating to Antrum of the Same Species (Lipoides ovariorum et corporis lutei ad corpus luteum physiologia et therapeutica). *Rev. d'obst. et d'ac. obs. Par.* 1914, 14, 6.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The product of internal secretion has been divided into two classes: (1) those which are used directly by the organism; (2) those which neutralize certain toxins produced by the body. The author discusses the conception of hyper- and hypofunction of the glands with internal secretion. Among the substances secreted the lipid play an important part and the author goes into a detailed discussion of this significant factor.

The lipoids of the ovary and corpus luteum the testicles, the uterine blood vessels are studied. There are two groups of lipoids: (1) those that are

stimulating only to the same species and (2) those that are stimulating to other species. The organs of internal secretion contain mixtures of lipoids which may be very different from one another compatible to the three very different fermentations of the pancreas. The ovaries when placed in alcohol, then dried and pulverized, then slowly extracted in acetone and, and chloroform, produce an extract which is soluble in alcohol insoluble in acetone and soluble in ether. *Illustration.*

Stauer, E.: The So-Called Struma of the Ovary: A Study of the Histogenesis of Ovarian Cysts (Über die Entstehung der Struma ovarii. Ein Beitrag zur Histogenese der Ovarialzysten). *Festschr. f. Geburtsh. u. Gynäk.* 1914, 14, 517.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author describes a very exact macroscopical and microscopical study of a so-called struma of the ovary. It is shown histologically that the tumor described originated from the surface epithelium of the ovary. Evidence could not be demonstrated in the colloidal secretion. Although the histological picture was markedly similar to that of the goiter there is no proof that these tumors are either metastases from goiter or teratomata with development of thyroid tissue exclusively but as such pictures are also found in ordinary cystadenomata the author concludes that struma of the ovary is only a cystadenoma of peculiar form.

The previously described cases of struma of the ovary are probably also to be explained in this way as those in which besides the goiter-like tissue, other constituents of true teratomata are to be found, since teratomata and cystadenomata are not infrequently mixed. At the same time the histological pictures show that cystadenomata may originate from the surface of the ovum. *Illustration.*

Von Klein, C.: Consistence of a Hydatidiform Mole and Bilateral Colloid Cysts of the Ovaries (Konsistenz einer Blasenmole mit doppelseitigen Hydatidomen der Ovarien). *Monatsh. f. Geburtsh. u. Gynäk.* 1914, 21, 561.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Laparotomy was performed on a 25-year-old woman in the second month of pregnancy with a clinical diagnosis of increasing retro-uterine hematoma with intrauterine pregnancy. The uterus was the size of a five-months pregnancy. There was a tumor of the right ovary, large as a fist, with a twisted pedicle and one of the left ovary the size of a child's head, increased in the pelvis. The latter had simulated a bicornuate uterus. Three hours after the operation a hydatidiform mole was spontaneously expelled and the remainder of the mole removed completely. Within a few days the rest of the mole was removed by use of a curette in the pulse. Recovery followed. Microscopic examination showed absence of villi, Langhans cells and syncytial masses, that is, the mole was typical according to Polansky's classification. *Illustration.*

**Antonelli G: Experimental Study of the Effect of Ovarian Castration on the Blood Picture**  
(Ricerche per un tale torno gli effetti della castrazione ovarica sul sangue) *Polist* Roma,

By Zentralbl. f. d. ges. Gynak. Geburtsh. u. Grenzgeb.

The removal of the ovaries from young dogs that have just become sexually mature leads to changes in the blood picture consisting of more or less marked decrease in the number of red blood-cells and decrease in hemoglobin. In certain cases there

a moderate degree of leucopenia with relative lymphocytosis or mononucleosis. After about two months these changes are compensated for. From this it appears that the ovary under physiological conditions has an internal secretion that exercises an effect on the blood forming as well as the leucocyte forming organs. Jo & Os

**Wichmann S E** The Epithelium of the Appendages of the Broad Ligament (Über das Epithelium des A hangagebilde des Ligament m latum)

Hy Zentralbl f d ges Gynak u Geburtsh s d Grenzgeb

From his research the author comes to the following conclusions. The first ciliated cells in the müllerian epithelium appear at the beginning of the fourth month of intra uterine life and appear first in the epithelium of the fimbria of the ovary. The formation of cilia then gradually passes down the tube and reaches the cornua of the uterus probably about the seventh month. In the new born the ciliated cells at the fimbria of the ovary and in the lateral part of the tube are about as numerous as the non-ciliated ones.

The first ciliated cells also appear in pairs therefore it may be assumed that the formation of cilia takes place in very young daughter cells after cell division. The epithelium of the penaeid appendages resembles that of the finbristles of the eurypterid. From about the seventh month the development of the epithelium of the closed appendage the hydatid is distinguished markedly from that of the open ones probably because of the changed condition in a closed cystic space. In the hydatid the epithelium picture varies in different cases and in different parts of the same hydatid chiefly in consequence of the different secretory condition of the epithelial cells. In the actively secretory parts of the hydatid the large and folded cell forms predominate while the resting epithelium contains only a few that display such as mostly low and cylindrical or cubic in form (compare with section 14) stratification.

RL

**Netto A Appendicitis Associated with Inflammation of the Adnexa (Catheterization & Studies les ppx 1 les associés ux annexes) 1**

B Journal de Chirurgie

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laparotomy for diseases of the uterus and adnexa in recent years found the appendix adherent to the adnexa in 23 cases that is in 18.6 per cent of the cases the adhesions being to the adnexa of the right side in 22 cases and in one case to the tube of the left side. In all these cases Carvalho removed the appendix thus conforming to the advice given by Barnsby in 1898 that when the appendix is adherent if only by its apex with or without vascular arborizations on the peritoneum it should be sacrificed absolutely.

P DE RIO BRA CO

**Von Lingen L. Exudative Pehic Peritoniti**  
(Pliopertonitis exudati) *St P terib med*  
Zisch 914. XIX 73

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. Grenzgeb.

The author reports 4 cases of pelvic peritonitis which he has treated during the last three years. It may be caused by febrile puerperium, abortion—especially if it is criminal gonorrhoea, sometimes appendicitis, and probably also by tuberculosis.

The patients generally come to the hospital several weeks after the beginning of the disease and when the pelvic peritonitis has already developed. The clinical picture varies according to the stage of the disease. At first there is severe pain over the whole abdomen, distention, tension of the abdominal walls, nausea, vomiting. These threatening symptoms however gradually disappear. The process becomes localized and circumscribed as a result of serous and fibrous exudate and adhesions between the uterus, intestine, omentum and adnexa. An exudate is formed that is firm to the touch. Examination of the vagina shows a large round tumor which frequently fluctuates and gradually fills the posterior vault of the vagina. Symptoms of the bladder and rectum do not appear. In some cases retention of urine discharge of mucus. The temperature is increased. The exudate is either gradually absorbed or a pelvic abscess is formed. If the abscess is not opened at the right time it may rupture into the peritoneum more rarely into the bladder or early into the abdominal cavity.

11 If the seal and incision of the poster r  
vault of the vagina and drainage of the suppurat  
focus with rubber drain left in a long time. The  
effect usually surprising. The duration of treat  
ment about the same; patient treated expect  
antly. In peritonitis, local ex-

Kreis Röntgenologische Messungen of the  
Peil is (Röntgenologische Beil messung) bei  
14 d. J. d. d. Deutsche Röntg. Ge. B. d.  
o. d. d. d.

By Zentralblatt für die Gesamte Geburtshilfe und Gynäkologie

The author gives the result of experiments with the Kober-Dessauer apparatus for measuring the rate of the promontory and lymphatic to be seen in the late conjugata ra can be made up to millimeter. The same experiment were made on the skeletons of women in the puerperium, the results of which were pregnant.

after a preceding caesarean section and symphysiotomy, and the results were controlled with a useful pelvimeter

Good photographs can rarely be obtained at the end of pregnancy but they can always be obtained up to the fifth month of pregnancy. In taking them the pelvis should be kept absolutely motionless and the pelvic inlet should be parallel to the plate. Such progress in technique will probably be made that it will become possible to measure the true conjugate radiologically even in marked adiposity and at all stages of pregnancy. This method has the advantage over internal measurement of not offering any possibility of injury or infection.

ALTO ALEXANDER

Martin L.: The Pelvis in Prolapse (Prolapsbecken). *Zucker f Geburt u Gynäk* 1914 LXII 749.  
By Zentralbl f d ges Gynäk. Geburtsh u d Gernzgeb

Anatomical examination of the pelvis has shown that the median section of the levator ani and the muscle groups of the genito-urinary diaphragm—that is the part of the pelvic floor forming the hiatus—is without exception stretched and at the same time hypertrophic. Martin concludes that the sensory apparatus first becomes defective then after the uterus is deprived of its chief support and is forced by intra-abdominal pressure out of its typical position the supporting apparatus is forced into compensatory hypertrophy. I. MEYER.

### EXTERNAL GENITALIA

Montopidan E.: Gonorrhoeal Diseases of the Female Genitalia (Gonorrhoeen des weiblichen Genitalien). *Lsgkr f Lsgkr* 1914 LXVI 377.  
By Zentralbl f d ges Gynäk u Geburtsh u d Gernzgeb

Montopidan has treated a great number of cases some of them by different intra-uterine methods, some of them passively with vaginal douches, and tampons. Of the 157 cases treated by intra-uterine method 17 per cent had laceration of the index and of the 156 not so treated 10 per cent had laceration of the index. This shows that intra-uterine treatment does not produce disease of the index. It also shows that the length of treatment is not shortened by intra-uterine treatment with the exception perhaps of treatment with 0.5 per cent hydrochloric acid. S. A. CAMMERTON

### MISCELLANEOUS

Borkl witsch A. Study of the So-Called Adenomyomata of the Female Genital Tract. (Beitrag Kenntnis der sogenannten Adenomyomata des weiblichen Genitaltraktes). *Lsgkr f Gynäk* 1914 LI 200.  
By Zentralbl f d ges Gynäk. Geburtsh u d Gernzgeb

Just a bibliography is given of the most important works on this question followed by a detailed description

of 10 of the author's cases with microscopic findings. He rejects the hypothesis of true tumor formation and thinks that 7 of his cases were muscle hyperplasia developed from a basis of chronic inflammation—adenomyometritis, one case of vaginal adenomyoma developed from a ruptured Müller's duct. In adenomyoma of the inguinal canal he attributed to a ruptured part of the Wolffian duct and a cystic adenomyoma of the uterus to a ruptured part of the müllerian duct. B. LEX.

Gudino Lewkowitz D.: Two Cases of Cysts of the Wolffian Duct (Die zwei Fälle von Cysten des Wolffschen Ganges). *Lsgkr f Gynäk. Geburtsh u d Gernzgeb* 1914 LXII 231.  
By Zentralbl f d ges Gynäk u Geburtsh u d Gernzgeb

The first case was a cyst of the vagina which was diagnosed as a cyst of the Wolffian duct because of the structure of its walls—a single layer of cubical epithelium—and because of its localization in the lateral wall of the vagina. In the second case there was a polyp as large as a hen's egg projecting from the cervix. The polyp which was removed was attached to the lateral wall of the internal os by a small pedicle and the contents was bloody. The cavity was lined with a cubical and in some places cylindrical epithelium. The structure of the cyst seemed to the author to indicate that it also originated from the Wolffian duct. Its localization also for in the region of the internal os the Wolffian duct approaches very near to the lumen of the uterus and often develops lateral processes. The anatomical differential diagnosis from other cysts is discussed in detail. B. ORTON

Meyer-Ruegg, H.: Tuberculosis of the Female Genitalia (Die Tuberkulose des weiblichen Genitalien). *Schweiz. Rndsch f Med* 94 21 335.  
By Zentralbl f d ges Gynäk u Geburtsh u d Gernzgeb

In two per cent of all female corpses there is found to be tuberculosis of the genital organs. Taking into account only the women dying of tuberculosis, there is genital tuberculosis in 15 per cent. Observations on autopsy show that genital tuberculosis is seldom isolated but that tubercular foci are to be found elsewhere in the body. In 90 per cent of cases there is tuberculosis of the tubes. The disease is almost always bilateral. In about half the cases the disease passes from the tubes to the uterus. Isolated tuberculosis of the uterus occurs in 11 per cent of the cases. Infection of the placenta is 3 per cent.

The ovaries are seldom affected, the mucous membrane of the cervix, vagina and vulva very rarely. In palpation in genital tuberculosis is generally negative but characteristic nodules can sometimes be found in Douglas's pouch. It is only exceptionally that bacilli are found in the secretion. Careful investigation for diagnosis is not without danger on account of infection of the tubes. Therefore the general condition must be utilized in diagnosis. The tuberculin reaction has little value. Genital tube

culosis often recovers if not it has a very chronic course. It has no tendency to pass into general tubercular peritonitis and the danger of miliary dissemination is not great. The treatment should be the same as that of general tuberculous. Operative treatment is justified only in cases in which there is hæmorrhage from the uterus as a result of the ulceration of the mucosa so severe in degree as to affect the general condition. JÄGER.

Meyer R. Ectopic Decidua (Über Ektopische Decidua). *Zisch f Geb u Gynäk* 914, lxxv 60.

By Zentralbl f d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Ectopic decidua has been observed on and in the ovary on the peritoneum of the uterus—mostly its posterior surface—on the pelvic peritoneum—especially in Douglas pouch—more rarely on the parietal pelvic peritoneum on the anterior wall of the uterus the vesico uterine space on the ligaments of the uterus on the omentum the small intestines the vermiform appendix, on the mucous membrane of the tube even in intra uterine pregnancy in the cervix and vagina in polyps adenomatous foci proliferating scars and on adhesive bands and very rarely on the peritoneum of the tube. It is not a physiological condition. The chief factor in its causation is probably a preceding inflammation. MORALLER.

Albrecht, H. Asthenic Infantism of the Female Genitalia and Its Significance in Medical Practice (Der asthenische Infantismus des weiblichen Geschlechts, d. seine Bedeutung für die ärztliche Praxis). *M d Kl. Berl* 94, 68.

By Zentralbl f d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Asthenic infantism is a hypoplastic anomaly of constitution characterized by the persistence of infantile and juvenile forms of growth with functional weakness and increased susceptibility to disease of the organs involved. The author follows Malthus's view. He describes the infantile forms of the bones, blood vessel and genital system. One particularly important manifestation of it is enteroptosis, the etiology of which is found in the format on of the thorax and spinal column and in asthenia of the entire stratum fibrosum. The external appearance is characterized by slenderness of the body, languid posture and pallor and acidity of the lun. More important than these physical signs are infantile and sthenic symptoms in the psychic and nervous system, especially neurasthenia and psychasthenia.

He discusses briefly the functional inferiority of the different systems of the body and the increased susceptibility to disease in the genital system mentioning in this connection frequency of abortion, severe disturbances during pregnancy, contracted pelvis, rigidity of the soft parts in delivery, deficient contractions, the frequency of retention of the placenta and atony, a tendency to prolapse, the predisposition of the infantile tubes to intra uterine pregnancy etc. Of yet greater im-

portance are the clinical pictures due to asthenia of the psychic and nervous systems. These are characterized by alternating periods of well being and severe illness without any organic changes. There are especially apt to be symptoms of the stomach, intestines and genital tract frequently combined. From the manifold variations of the symptoms of asthenic infantism it is clear that a large percentage of all female patients might fall in this category. The author gives a warning against local and especially operative treatment in such cases. This is especially to be observed in appendicitis, movable kidney and retroflexion of the uterus. Permanent results cannot be gained by surgery, only a rational psychotherapy can save these women from the hands of the quacks into whose care they so frequently fall. KUEHNEN.

Herrmann E. The Clinical Significance of Changes in the Female Genitalia, in Status Hypoplasticus (Die klinische Bedeutung der Veränderungen am weiblichen Genitale beim Status hypoplasticus). *Gy. k. R. Adelsch.* 94, III, 4.

By Zentralbl f d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

On the basis of 203 cases the author comes to the conclusion that among the signs of constitutional anomaly are changes in the ovary among them being abnormal size, smoothness of the surface and connective-tissue hyperplasia with disturbance in the function of the follicular system. The biological inferiority in 56.5 per cent of the cases of status hypoplasticus causes general hypoplasia of the genitals and as a result in 54.45 per cent of the cases primary sterility. GUTHASOW.

Nessmelowa S. N. Changes in the Blood during Menstruation (Beiträge u. den Veränderungen des Blutes durch die Menstruation). *D. med. Monatsh.* 93.

By Zentralbl f d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports a series of blood examinations in 27 normal women of the same age and living under practically the same conditions. Examined on was made for changes in the number of the erythrocytes, leucocytes, the resistance of the red blood cells to salt solution and the viscosity. The blood of each individual was examined daily for a month. There were four periodic phases in the blood picture in women the normal or intermenstrual lasting on an average thirteen days, the premenstrual about 6 to 7 days, menstrual and postmenstrual each lasting about 4 days.

In the normal type of menstruation there were variations in the erythrocyte count from 500,000 to 1,500,000. On an average there was an increase in the erythrocyte count to 1,183,000 above the normal 3 to 9 days before the beginning of the menses. During menstruation the number of erythrocytes was slightly increased over normal. At the beginning of the postmenstrual period the number of erythrocytes increases again then gradually grows smaller until it reaches the intermenstrual figure.

The percentage of hæmoglobin runs parallel to the erythrocyte count but shows slighter variations. With a sudden increase in the number of erythrocytes the color index sinks. The variations in the leucocyte count run parallel in a general way with those in the red cell count. All the forms except the mast-cells take part in the increase.

The absolute number of neutrophile cells is increased in the premenstrual period but to a less degree than the other forms. The number of small and large forms of leucocytes shows a sudden rise; the transitional forms are the ones most affected in the rise of the mononuclears. The eosinophiles are increased about 1.4 per cent over the intermenstrual period.

During the menses the leucocytes show the lowest count; this relative leucopenia is caused by a decrease in the number of the polymuclear leucocytes. In the postmenstrual period it is chiefly the latter that are increased. It is an interesting point that in many cases, if the menstrual discharge is delayed, the changes in the blood picture nevertheless take place at the accustomed time. Then when the discharge takes place the changes in the blood picture are slighter, sometimes scarcely noticeable. This would indicate that the menstrual bleeding as such is not the cause of the changes. Probably the glands of internal secretion are involved in it. The kinds of changes in the blood would indicate this also, as there are resemblances in many points to the blood changes in diseases of the thyroid, the hypophysis and the thymus, and anaphylactic conditions are manifested. The minimum resistance of the red blood-cells to salt solutions in the intermenstrual period was 0.49 to 0.52; the maximum 0.33 to 0.36 NaCl; the degree of resistance showed variations during the premenstrual period. At the time of menstruation the minimum resistance was 0.49 to 0.55; the maximum 0.3 to 0.39 NaCl. In the postmenstrual period only the maximum resistance was increased. Viscosity in the interval was 3.5 to 4.5; it is increased in the premenstrual and decreased during the menstrual period. There was an increase in coagulation time during menstruation, a decrease in the premenstrual period.

WARREN

Deutsch, A. The Treatment of Hemorrhage in Adolescence with Pituglandol (Die Behandlung der Adoleszentenblutungen mit Pituglandol). *Zentralbl. f. Gynäk. u. Geburtsh.* 1914, 7.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

In cases, chiefly in young girls in which the usual styptics failed almost certain hæmorrhage was attained by the use of pituglandol. Hoffman's Roche's pituglandol was used and linearly 25 to 30 subcutaneous injections of 1 ccm were sufficient. Intervals of one to three days were left between the doses. If the hæmorrhage did not stop completely after this treatment at the end of one to four weeks another series of injections was begun and the desired result was always obtained.

The general condition improved and harmful effects were never observed although in some cases as much as 45 ccm. was given altogether. The author recommends that preparations of hypophysis be used in all genital hæmorrhages in young girls before radical treatment such as castration amputation of the body of the uterus or vaginal treatment is decided upon.

BRUNNEN

Brugnatelli, E. Interstitial Cells and Internal Secretion of the Mammary Gland (Cellule interstiziali e secrezione interna della mammella). *Foll. gynec.* 1914, 12, 7.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

With different methods of staining the author found two classes of fat containing connective tissue cells in the mammary glands of pregnant women. One kind represents a series of transition forms to Unna's metachromatic mast-cells and probably contains lipid phosphates. The same cells were found in pathological tissue by Huguënin and by Ciacco, who called them mastlipoid cell. The second class of cells contain in their interior glycine and cholesterol and in their peripheral part phosphates, and in arrangement and structure they have the greatest similarity to the cells of the corpus luteum of pregnancy and the zona fasciculata of the adrenals. Just as the latter are regarded as typical cells of internal secretion the author is inclined to regard the similar cells of the mammary gland as producers of hormones. As a hypothetical result of his work he suggests the origin of the interstitial cells of the mammary gland and reproductive glands from adventitial wandering cells.

WEISHAUPT

Hedinger, L. Significance of Preen in the Evolution of the Mammary Glands (Zur Bedeutung der Preenen in der Evolution der Brustdrüse). *Berl. kl. Wochenschr.* 1914, 51, 517.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author reports five cases in which the mammary gland were removed on account of pain in the breast. The women were all of middle age and pathological anatomical examination showed the picture of premenstrual involution.

The author discusses the different forms of mastodynia localized tumor chronic mastitis, mastodynia without tumor formation according to Huguënin's classification. He discusses the possible cause of painful mamma in premenstrual involution but in such cases, he is unable to tell whether there is relation to the rest of the sexual apparatus or to other changes in the body.

EXAMINER

Bauerstein, A. The Significance of Bacteriological Examination before and after Gynecological Operations (Die Bedeutung bakteriologischer Kontrolluntersuchungen vor, während, und nach gynäkologischen Operationen). *Beitr. Klin. u. gynec. u. Geburtsh.* 1914, 12, 463.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author made careful bacteriological examinations in 340 perineal cases from the Kiel Gynecological

cal Clinic 154 laparotomies 41 major vaginal operations and 45 operations of different kinds. He insists that the vagina be disinfected in every vaginal operation. Bacteriological examination is important in the prognosis. If the field of operation is free from bacteria the post-operative course is generally favorable. The peritoneum is best protected from bacteria by conservative treatment by careful covering over of all cut surfaces with peritoneum by washing out of the paces with fluid and by the avoidance of intraperitoneal tampons.

Especial demands are made on technique when it is necessary to combat endogenous bacteria carcinoma and tumors of the adnexa. In such cases the technique is the decisive factor in the result. Bacteriological examination of the abdominal wound as well as of the peritoneum at the end of the operation frequently showed micro-organisms, which came chiefly from the skin and from the scattering of endogenous bacteria, therefore special stress is laid on the method of preparing patients for gynecological operations.

On the evening before the operation the patient is given a full bath and bichloride compresses are placed on the abdomen the next morning just before the operation the vulva is rubbed with iodobenzene and the vagina irrigated and rubbed with 1 per cent bichloride and 5 per cent alcohol solution a 7 per cent tincture of iodine solution is used for the skin of the vulva and the abdominal wall is given vigorous rubbing with iodobenzene and a 7 per cent solution of tincture of iodine. Then the skin is covered with a cloth with a slit in it padded with Billroth's gauze so that only a little of the skin is visible. After opening the abdominal cavity the entire abdominal wound is surrounded with slit Billroth gauze. The author believes the results of all operative treatment depend on aseptic and technique.

ESLIXA

Henkel, M. Irradiation in Gynecology the Treatment of Carcinoma of the Uterus (Zur Strahlentherapie der Gynäkologie Die Behandlung des Uteruscarcinoms) *M. nchr. med. Wchnschr.* 914 15 7

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The latest experiments show that the mesothorium rays do not have an elective effect on the carcinoma cells and that the optimum dosage is between 100 and 200 mg mesothorium. Above this there may be severe injury to the tissues so much so as to even threaten life. The effect of the mesothorium does not penetrate more than 4 to 5 cm.

Heetmann and Mayer's experiment is shown that lead filtration is absolutely contraindicated since the loss of  $\gamma$ -rays is 21 per cent contrast with 3

per cent with brass. Also the  $\gamma$  rays held in the lead filter undergo such a transformation that they become similar to  $\beta$ -rays and like these have an injurious effect on the superficial tissues. When the brass filter is used the few secondary rays formed can easily be excluded by the use of a rubber covering.

The technique of the gynecological clinic at Jena is described. Many inoperable carcinomata after a time become movable and can be removed by operation. Vaginal total extirpation is preferred. The remnants should then be treated by further irradiation or intravenous injection of enzytol. Vaccine therapy may also be used for metastases and cancerous glands. The primary tumor is macerated and subjected to autolysis and the material obtained is used for vaccination.

Röntgen treatment may also be used with a new apparatus which enables colossal doses to be given in a short time at a comparatively low cost. This is sometimes given in connection with Krukenberg's proposed injection of calcium tungstate behind the carcinoma designed to increase the activity of the röntgen rays.

K. HOFFMANN

Blumenfeldt, E. and Dahlmann, A. The Electrometrogram in Animal Experiments (Zur Kenntnis des tierische Elektrometrogramms) *Ztschr. f. Geb. u. Gyn.* 94 12 403  
By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

Theilhaber first tested the electrical current of the female uterus by means of the string galvanometer and originated the term electrometrogram.

The authors in testing Theilhaber's result on women in the puerperium did not get uniform results. They tried therefore by animal experiment to determine whether on stimulation of the uterus there is a connection between the visible contractions of the uterus and the curves shown by the string galvanometer. They experimented by Franke's method on the uterus of rabbits and dogs (1 to 3 Th. 3) and detailed description of the experiment.

The result showed that the spontaneous contractions of the uterus in rabbits which had been delivered or artificially produced contractions could for the most part be readily registered mechanically. At the same time curves were always visible on the string galvanometer and they appeared a little bit earlier than the visible contractions of the uterus. Therefore it is certain that there is a connection between the electrical and mechanical condition of the uterus. The accurate analysis of the curves published demonstrated a yet more extensive experimental study.

RIEHE

# OBSTETRICS

## PREGNANCY AND ITS COMPLICATIONS

Beckmann W. Advanced Extra Uterine Pregnancy (Über Extrauterine gravidität in den letzten Schwangerschaftsmonaten). J. d. G. Gynäk. u. Geburtsh. 1914 x 2 81.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Prawossud in 1910 collected 100 cases of advanced extra uterine pregnancy from the literature the author adds 37 new ones from the literature and two of his own. The first case was a 7 months abdominal pregnancy after rupture of the left gravid tube at about the second month. Laparotomy was performed followed by peritonitis and death.

The second case was also an abdominal pregnancy continuing to develop after rupture of the tube. Because of intimate adhesions to the intestines it was not possible to remove all the placenta, and the patient died of progressive peritonitis, results from necrosis of the fragments of placenta.

The clinical diagnosis of advanced extra uterine pregnancy is difficult. It is easy to demonstrate that there is an ectopic pregnancy but its exact topography can seldom be determined even under anesthesia. The most important symptom is very severe and constant pain in the abdomen. There is no unanimity as to treatment; some authors advise immediate operation, others prefer expectant treatment.

The author points out the great dangers of expectant treatment and advises immediate operation. The operation may consist in complete removal of the placenta or in suturing it to the abdominal wall. The former is to be preferred as it is a more correct surgical procedure. Marsupialization should be performed only when complete extirpation is technically impossible. B. Orrow.

Hoehn. Intra Uterine Pregnancy after Extra Uterine Pregnancy (I trauterinegravidität nach ausserergravidität). M. d. G. Gynäk. u. Geburtsh. 1914 x 2 154.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In spite of the fact that normal intra-uterine pregnancies were observed after extra uterine pregnancy in 50 per cent of the cases, the changes in the tubes in extra uterine pregnancy should not be underestimated. Hoehn showed by projection pictures of the injected tubes that there was peripheral and central smooth growth of the folds intramural branching of the lumen of the tube and in one case, complete atresia of the tube.

The following conclusions are reached. It is a mistake (1) to simply remove the ovum from the pregnant tube and leave the tube (2) to amputate

the pregnant tube and leave a larger or smaller stump of the tube attached to the uterus (3) to perform plastic operations on the opposite non-pregnant tube unless the patient wishes to preserve every possibility of conception and takes upon herself the risk of another extra uterine pregnancy. E. Karsch.

Roulet J. Coexistence of Intra and Extra Uterine Pregnancy Interrupted Simultaneously at the End of Three Months; Recovery without Operation (Coexistence de grossesses extra et intra-utérine, interrompues simultanément à l'issue du 3 mois. Guérison sans intervention opératoire). B. d. Soc. d'obst. et de gynec. de Paris 1914 14, 92.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The patient was a 37 year-old VI para in the ninth month of pregnancy. The diagnosis on admission was retention after abortion. The last menses had been in September 1913 with slight loss of blood in October and November. At the end of November abortion occurred. Afterwards there was increasing pain and signs of an infectious abortion with retention. A resultant circumscribed intra-abdominal tumor was found and sensitive to pressure. The cavity of the uterus was empty and 6.5 cm long. From Douglas pouch a fluctuating zone could be felt surrounding the tumor. The diagnosis was retro uterine hematocoele after extra uterine abortion. After a successful intra-uterine abortion. After expectant treatment there was a gradual disappearance of all symptoms without operation.

The author holds that nothing more than a probable diagnosis can be made at least not before the third month. The abdominal abortion must have preceded the intra uterine one. He warns against too vigorous treatment in such cases. In the hospital expectant treatment should be given and if infection occurs, colpotomy and drainage should be done. Outside the hospital laparotomy must be performed. Some of the participants in the discussion doubted the correctness of the diagnosis. H. Mass.

Bogdanovits, M. Twin Pregnancy with One Living Child Inside, and One Outside the Uterus (Zwillinge G. v. d. m. mit intra- und extra uterinem leben d. m. Kinde). Oren. Heilap. 1914 19, 92.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Twenty two days after the birth, outside of the hospital, of a living full term boy the mother was operated on at the hospital for extra-uterine pregnancy and a living full term girl delivered. This child lived only a few minutes after the operation. It is noteworthy that the woman had already



had one pair of twins of different sexes (3) that a corpus luteum was found only in the left ovary (the extra uterine pregnancy was on the left side) (3) that in this case both the children were full term and living. The extra uterine child did not attain full development until twenty two days after the intra uterine one and was not viable in spite of the fact that it survived the delivery of the intra uterine child. FROST.

Gray A. L. Eclampsia *J M St M Ass* 914, 46 By Surg Gynec & Obst

The author of this paper gives a brief but clear description of eclampsia. He first considers the etiology of this condition and is of the opinion that the poisonous substance is generated in several locations, and three organs especially viz. the placenta and intestinal tract.

Next he considers the symptomatology of eclampsia and lays great stress on a blood pressure of 150 or above. The author believes that eclampsia seizures can be prevented in almost every case and when such seizures occur it is due in 95 per cent of cases to causes discoverable and preventable by the physician or to inattention or indolence on the part of the patient.

As a proof of the above assertion he states that since making this a special work he has had but two cases of eclampsia in the last 100 births and in both of these cases he had no previous knowledge of the cases until one week before labor and that the time for elimination and treatment was too short.

In considering treatment Gray divides it into three stages. First preceding attacks and during the manifestation of prodromal symptoms second during attack third following attack.

The primary object of all his is of treatment whether during the prodromal stage or following the attack is lowering the blood pressure. The author believes that eclampsia cannot be successfuly treated without the use of a blood pressure apparatus. It is both the diagnostician and prognosticator. A blood pressure of less than 150 means comparative safety. His method of lowering the blood pressure is to cause elimination through the kidneys and bowels. This may be accomplished first by hydropneumatic measures second by drinking large quantities of water and third by a variety of cathartics preferably licorice and jalap powder. Compound or in tincture of iron or iron salts. Epsom salts etc.

He next considers the treatment of the seizure itself and his is to give faith in the medical treatment which is in the hands of a skilful operator. In a manual procedure he advocates manual or instrumental delivery. In case of convulsions during the seizure there is no better means of lowering the blood pressure than blood letting. This especially if it is in the plethoric full blooded patient with large full bounding pulse.

A. H. CANN

Pisani S. and Savard M. Cholesteræmia and Wassermann's Reaction in Eclampsia (Cholesteræmia e reazione di Wassermann nelle clampsie) *Gaz* 194, 60

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Hypercholesteræmia always occurs in patients with eclampsia to a greater degree than in normal pregnant women. Hypercholesteræmia never gives a completely positive Wassermann reaction but only partial reactions which is due to the anti-hæmolytic and anticomplementary properties of the cholesterol. Cholesterin is not to be compared with a syphilitic antibody and probably increases as a result of hyperfunction of the adrenals and dysfunction of the liver. The significance of the placenta in hypercholesteræmia is under discussion retention rather than hyperproduction deserves more study. In the 16 experiments performed by the author the more pronounced the symptoms the greater was the degree of cholesteræmia. There is a detailed discussion of the literature. MESTROW.

Ferré: A Series of Recent Cesarean Operations (Sur une série d'opérations césariennes récentes) *Ann.* d. G. G. 188, 104, 211, 160

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The author reports 12 cesarean sections. One child died on the fifth day. One mother on whom cesarean section was performed for the second time and who had been in labor three days before the operation died. The uterus was removed the old scar was thin as parchment but firm. Three women had fistulae from the uterus through the abdominal wall. In one woman a compress was left in the abdominal cavity which after 7 weeks was discharged from the rectum accompanied by colicky pains. JAEGER.

Wolff: Rupture of the Uterus in the Scar Left by Cervical Cesarean Section (Uterusruptur; der Riss kaiserschnittnahe nach cervicalem Kaiserschnitt) *Zi. f. G. burtsh.* Gynäk. 194, 18, 74

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The author reports the case of a 30-year-old II para, in which cervical cesarean section was done at the end of pregnancy for contracted pelvis. The longitudinal incision of the cervix had to be prolonged into the body and the living child was extracted by the foot. The puerperium was febrile. Healing was by second intention. A year later the patient was again admitted to the hospital at the end of pregnancy. Rupture in the old scar had occurred during the first stage of labor during which the child died. The uterus was totally extirpated. Brain embolism occurred during the puerperium. The patient is still under treatment. Microscopically the cicatricial tissue was infiltrated with decidua almost to the serosa.

In 43 cases from the literature of rupture in the scar of a cesarean section, the puerperium after the cesarean section was almost always fatal.

as it was in the above case. Union does not take place, the muscle-bundles do not regenerate and the scar is poorly consolidated. In the case reported there were unabsorbed catgut sutures in the specimen from the operation a year before. In the 49 cases, the infantile mortality was 60 per cent and the maternal mortality 26 per cent as contrasted with 46 or 47 per cent in other ruptures of the uterus. The more favorable results of rupture in scars from cesarean section is due to the fact that they generally take place in the hospital. Porro's operation is generally used in the treatment. FRITZER.

Fuchs, H.: Cesarean Section for Total Ankylosis of Both Hip-Joints (Kesserschmitt wegen totaler Ankylose beider Hüftgelenke). *Monatsschrift f. Geburtsh. u. Gynäk.* 914, XXX 477.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

A 30-year-old woman had had a spontaneous delivery 6 years before her present pregnancy. She had had an abortion before the first delivery and an abortion three years ago with severe symptoms of sepsis—metastatic pyemic suppuration in the region of both hip-joints. Finally she recovered but had bilateral ankylosis of the hip-joints. She was a slender woman, 146 cm tall, she had no abnormalities in the pelvis, but the soft parts were somewhat atrophied. With both thighs fixed in slight flexion with marked adduction and rotation inward vaginal exploration with two fingers could be performed only with great difficulty. The posterior edge of the pelvic outlet however could be reached tolerably easily in the lateral position at about the middle of the ramus of the pubis. The woman wanted a living child. The child was in breech position. Abdominal transperitoneal cesarean section was performed and a living full term girl delivered. The puerperium was afebrile.

Only four cases are described in the literature of delivery in bilateral ankylosis of the hip—two were spontaneous deliveries and two were delivered by cesarean section. The author believes that cesarean section is not justified in head presentations as normal delivery in the lateral position is quite possible. The chances of delivering a living child by the natural route are much less favorable in breech presentations. Because of the difficulty of access to the pelvic outlet cesarean section indicated in the interests of the child. HART.

Lindemann, W.: Vaginal Cesarean Section in Placenta Prævia (Über die Anwendung der Hysterotomia anterior bei Placenta prævia). *Prakt. Erg. in d. Geburtsh.* 914, VII 63.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

In the treatment of placenta prævia by cesarean section the author prefers the vaginal route. Its advantages as contrasted with the abdominal route are better cosmetic effect and avoidance of hernia and suppuration of the wound. It has the advantage over extraperitoneal cesarean section of being easier to perform. With injuries of the bladder are

almost impossible. It may be complicated by insertion of the placenta in the cervix but such cases are rare. The dangers in placenta accreta are the same in the vaginal and abdominal operation, other wise the insertion of the placenta is not of any special importance. The loss of blood is not great. The operation itself does not offer any great difficulty. Conditions for its use are more unfavorable in primiparae. If the vaginal operation is not practicable in these cases, abdominal cesarean section is to be recommended.

Among 31 cases of vaginal cesarean section only one patient died from an unknown cause, making the mortality 3.2 per cent. The maternal morbidity was 64.1 per cent. In 35 per cent of the cases the insertion of the placenta was central, in 65 per cent marginal. There were 32 children. Three of them had died before labor, one a non-viable twin was born dead, 9 died after delivery, 3 of infection, 4 of rupture of the testis, one of a disease probably syphilis, and one from an unknown cause. Deducting the non-viable ones, the infantile mortality was 24 per cent. BENTON.

Polano, O.: Further Experience with Posterior Cervical Cesarean Section (Weitere Erfahrungen mit der Section caesarea cervicalis posterior). *Mittheil. med. W. Saude* 914, IX, 88.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author describes 7 of his own cases. Twice there was severe eclampsia, once the posterior cervical cesarean section was repeated in a woman who had been operated upon in the same way two years before. One case was slightly infected and in three cases there were adhesions of the anterior wall of the uterus following a preceding cesarean section above the symphysis. In the first case there was death from eclampsia.

The method proved good in all the cases. The objections that have been urged against it are: (1) Possibility of injuring the child by making it breathe difficult by constriction of the chest through pressure of the uterus against the symphysis. (2) Severe hemorrhage as a result of stasis. (3) The dangers due to the large incision.

The answers to these objections are as follows: (1) The operation is carried out rapidly, the child needs little oxygen and the constriction of the vessels is not complete. Among 2 cases there was neither a pharynx nor any of the children. (2) There is not much danger of hemorrhage as the incision is most cases is far away from the site of the placenta and it can easily be restricted by traction in the uterus moreover an intact myometrium contracts better and more quickly than an incised one. (3) In the majority of cases a small abdominal incision is sufficient beginning 3 to 4 finger breadths below the umbilicus and continuing up and to a little below.

Drainage of Douglas's pouch in unclean cases is superfluous, since it is easy to inspect the true pelvis with the uterus retracted and to cleanse it from

any infection but drainage through Douglas pouch for the sake of added safety is always possible. Posterior cervical cesarean section has shown its special value for certain classes of cases such as those where there are adhesions between the anterior wall of the uterus and the abdominal wall pendulous abdomen or undilated os MORALLER

**Lawrence E. J. Impassable Contraction of the Gravid Uterus. Report of One Case Verified by Cesarean Section. Dilatation of the Stomach Recovery.** *Northwest Med.* 914 1, 69  
By Surg. Gynec. & Obst.

Lawrence reports a case of dystocia due to impassable contraction ring verified by cesarean section. He further states that in all the literature upon this condition during the past 10 years, only 4 other cases have been confirmed by this operation.

The treatment he adds, depends upon the degree of obstruction for there are many cases where a well formed Bandl ring can be diagnosed—in these a dose of morphia or an anæsthetic will relax the spasm. Forceps delivery in such cases is easy provided there are no other complications.

In extreme cases the use of forceps is either very difficult or impossible because the head is well above the brim. If an application is successful the forceps will slip or if traction of any degree is made the uterus is dragged down tightly over the forcéps.

Incision of the contraction ring has been done but is a very difficult and dangerous procedure. Cesarean section offers the ideal treatment for this condition. Embryotomy should be done if the baby is dead. HARVEY B. MATTHEWS

**Brodhead G. L. Cesarean Section for Double Multilocular Ovarian Cyst.** *N. J. M. J.* 94 2219 9  
By Surg. Gynec. & Obst.

The case reported had a difficult labor with a stillbirth previously. In the last pregnancy an ovarian tumor was pushed down into Douglas cul-de-sac on account of which a cesarean section was performed and the tumor removed with an uneventful recovery. The author suggests the possibility of replicating these tumors by posture or removing them by vaginal section if they appear below the sixth month. D. H. BORN

**Robach W. Results of Examination after Extraperitoneal and Transperitoneal Cesarean Section.** (Nach Untersuchungsresultate nach extra- und transperitonealem Kaiserschnitt.) *Ztschr. f. Geb. u. G.* 94 131 530  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author examined 33 patients among 87 which were operated on by extraperitoneal cesarean section and 5 among 81 transperitoneal ones. There were rarely symptoms after operation and even when there were they disappeared after a short time. The capacity for work was not decreased. No disturbances of bladder function were observed.

Hernias in the scar were found in 8 per cent of the cases, two after extra and one after transperitoneal

section. They are best avoided by the lateral oblique incision on the left and extraperitoneal operation with suitable after treatment. The cervical scars were absolutely firm and resistant to the dangers of renewed pregnancy more so than the body scars. Adhesions and bands between the cervix and the abdominal wall were never observed in spite of the fact that gauze drainage was used in the open wounds and about half of the cases were infected or open to the suspicion of infection.

In 82 per cent of the cases of extraperitoneal section the position of the uterus remained normal after the operation. Abnormal positions occurred but were easily corrected as the uterus was movable. The primary viability of the children was 100 per cent and 81 per cent of them were living at the end of the year. The results are good. The most important point in the prognosis of cesarean section is to operate extraperitoneally. HIZAO

**Van Cauwenbergh A. Advantages of Artificial Premature Delivery.** (Utilité de l'accouchement prématuré artificiel.) *Rev. mens. de gynéc. Obst. et de pédi.* Bordeaux 29 3 2111 729  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author gives a historical review of the development of artificial premature delivery and discusses in detail the indications for this procedure. Among the methods of carrying it out he gives simple puncture of the membranes, the induction of contractions of the uterus by intramuscular injection of pituitrin, the introduction of an elastic bougie between the membranes and the wall of the uterus and finally, the artificial dilatation of the cervix with or without the introduction of a bag in the lower uterine segment. He concludes:

1. Artificial early induction of labor is of great value in cases of contracted pelvis and is without danger for mother and child if performed at the right time by a method adapted to the case in hand.
2. Child en born in this way have to be handled with special care and breast feeding is essential.
3. If artificial early delivery is to be considered the pelvis must be large enough so that labor need not be induced till the thirty-fourth week. This is the only way to avoid high direct and indirect mortality of the children.
4. If the pelvis is so much contracted that the child cannot be delivered in this way at the thirty-fourth week for the sake of the child some other method must be selected that permits of longer waiting. BAER

**Lienau A. Artificial Abortion in Psychoses from the Psychiatric, Medical and Ethical Point of View.** (Über künstliche Unterbrechung der Schwangerschaft bei Psychosen im psychiatrisch, ärztlichen und ethischen Belichtung.) *Arch. f. Psych. u. Berl.* 914 11 95  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

On the basis of 39 cases the author comes to the conclusion that artificial abortion is indicated in

as it was in the above case. Union does not take place, the muscle-bundles do not regenerate and the scar is poorly consolidated. In the case reported there were unabsorbed catgut sutures in the specimen from the operation a year before. In the 49 cases the infantile mortality was 60 per cent and the maternal mortality 26 per cent as contrasted with 46 or 47 per cent in other ruptures of the uterus. The more favorable results of rupture in scars from caesarean section is due to the fact that they generally take place in the hospital. Porro's operation is generally used in the treatment. **BRITISH.**

**Fuchs H. Caesarean Section for Total Ankylosis of Both Hip-Joints (Kaiserschitt wegen totaler Ankylose beider Hüftgelenke) M. naitcher f. Geburtsh. u. Gyn. 28 014 2222 477**

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A 30-year-old woman had had a spontaneous delivery 6 years before her present pregnancy. She had had an abortion before the first delivery and an abortion three years ago with severe symptoms of sepsis—metastatic pyæmic suppuration in the region of both hip-joints. Finally she recovered but had lateral ankylosis of the hip-joints. She was a slender woman 146 cm. tall, she had no abnormalities in the pelvis but the soft parts were somewhat atrophied. With both thighs fixed in slight flexion with marked adduction and rotation inward vaginal exploration with two fingers could be performed only with great difficulty. The posterior edge of the pelvic outlet however could be reached tolerably easily in the lateral position at about the middle of the ramus of the pubis. The woman wanted a living child. The child was in breech position. Abdominal transperitoneal caesarean section was performed and a living full-term girl delivered. The puerperium was of brief duration.

Only four cases are described in the literature of delivery in bilateral ankylosis of the hip—two were spontaneous deliveries and two were delivered by caesarean section. The author believes that caesarean section is not justified in head presentations as normal delivery in the lateral position is quite possible. The chances of delivering a living child by the natural route are much less favorable in breech presentations. Because of the difficulty of access to the pelvic outlet caesarean section is indicated in the interests of the child. **HARM.**

**Lindemann W. Vaginal Caesarean Section in Placenta Prævia (Über die Anwendung der Hystiotomie versus bei Placenta prævia) Festschr. d. Geburtsh. u. Gyn. 28 9 4 63**

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In the treatment of placenta prævia by caesarean section the author prefers the vaginal route. Its advantages as contrasted with the abdominal route are better cosmetic effect and avoidance of hernia and suppuration of the wound. It has the advantage over extraperitoneal caesarean section of being easier to perform. With it injuries of the bladder are

almost impossible. It may be complicated by insertion of the placenta in the cervix but such cases are rare. The dangers in placenta prævia are the same in the vaginal and abdominal operation other than the insertion of the placenta is not of any special importance. The loss of blood is not great. The operation itself does not offer any great difficulties. Conditions for its use are more unfavorable in primiparae. If the vaginal operation is not practicable in these cases, abdominal caesarean section is to be recommended.

Among 31 cases of vaginal caesarean section only one patient died from an unknown cause making the mortality 3.2 per cent. The maternal morbidity was 64.1 per cent. In 35 per cent of the cases the insertion of the placenta was central in 65 per cent marginal. There were 32 children. Three of them had died before labor, one a non-viable twin, was born dead, 9 died after delivery, 3 of inanition, 4 of rupture of the testis, one of a disease probably syphilis, and one from an unknown cause. Deducting the non-viable ones, the infantile mortality was 24 per cent. **BRITISH.**

**Folano, O. Further Experience with Posterior Cervical Caesarean Section (Weitere Erfahrungen mit der Section caesarea cervicalis posterior) Münch. med. Wochenschr. 29 4, 12 818**

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author describes 7 of his own cases. Twice there was severe eclampsia once the posterior cervical caesarean section was repeated in a woman who had been operated upon in the same way two years before. One case was slightly infected and in three cases there were adhesions of the anterior wall of the uterus following a preceding caesarean section above the symphysis. In the first case there was death from eclampsia.

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Drainage of Douglas' pouch in unclean cases is superfluous and it is easy to inspect the true pelvis with the uterus anteverted and to cleanse it from

placenta previa is made the child should be delivered without regard to its viability. The author recommends as the best methods version or metruarysis. Cases of premature separation of the normally implanted placenta should be sent to the hospital for immediate operative delivery.

HITRELL

**Sargent E. Tuberculosis and Pregnancy (Tuberculosis et grossesse)** *Rev prat d'obst et de pédiat*  
6-1-37 17

№ Zentralbl f d ges Gynak u Geburtsh d Grenzgeb

In regard to the influence of tuberculosis on pregnancy the author states that tubercular women seldom become pregnant and that abortion is rare even in cavernous phthisis. In very advanced tuberculous abortion occurs spontaneously or during haemoptysis or an attack of fever.

As to the influence of pregnancy on tuberculosis opinions are divided. According to most authors pregnancy reduces the resistance of the body (chlorosis, decalcification, excretion of phosphorus). Frequently auto-intoxications appear from the liver, kidney and adrenals. Decalcification of adrenals insufficiency occur both in tuberculosis and pregnancy so there may be summation of the injury done. Torpid cases of tuberculosis may not be made any worse by the pregnancy but progress of tuberculosis usually is. The latter part of pregnancy, the puerperium and nursing are especially dangerous for the tubercular woman—labor itself is so. In unfavorable cases the patients die two or three weeks post partum with septic symptoms or of primary tuberculosis or after a few weeks or months the disease grows worse and the patients slowly succumb to it.

Since tubercle bacilli have been found in the blood of the umbilical vein direct transmission of tuberculous from the mother to the child cannot be excluded but infection in the family and inherited predisposition must also be considered. As 33 per cent of the children of tuberculous mothers have it is evident that artificial abortion should not be performed in pregnancy.

The thoracic tubercular nodes are not in the children. If pregnancy occurs steps should be taken to prevent decalcification. The adrenal should be given. The child should be taken from the mother immediately after birth.

**Test:**

Imhof &amp; R. The Present Status of the Question of Tuberculosis of the Larynx and Pregnancy

(1) geg. Artus stand de k g der hehlik pi  
i berk lue nd Sch angerschaft) Pr g med

13 Zentralbl. f. d. ges. Lymph.      Geburtsh. u. d. Grenzgeb.

The author has determined from a study of the literature and his own cases that tuberculosis of the larynx is a relatively rare complication of pregnancy. Whether by clinical or pathological anatomical study could be demonstrated a predilection of

pregnant women to tuberculosis of the larynx. The prognosis of tuberculosis of the larynx is extremely unfavorable. The mortality is 86 to 90 per cent. In cases of tuberculosis of the larynx and pregnancy for the first five months abortion should always be induced and tubal sterilization performed. Pregnancy after the fifth month should be allowed to continue and premature delivery should not be induced as the results of premature labor are very bad.

The treatment of tuberculosis of the larynx during pregnancy should be limited to palliative measures. Tracheotomy should be performed in severe dyspnoea but tracheotomy as a curative measure which was formerly much in vogue is now seldom recommended.

Rosenstein M Appendicitis and Pregnancy  
(Appendicitis und Gravidität)  
Leipzig: G. Fischer, 1938. 200 pp.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. n. d. Grenzgeb.

Surgical treatment is much more to be commended in pregnancy than conservative treatment. If the appendicitis is mild especially in the first half of pregnancy the pregnancy should be maintained. Experience has shown however that after an abortion or premature delivery the prognosis is better the earlier appendectomy is performed. If there is signs of a beginning abortion or of premature delivery the appendix has first been successfully removed in many cases. Such a successful case is reported. The extremely high mortality of appendicitis in pregnancy can only be improved by early diagnosis and operation. BENTON

### Yautime Simulated Appendicitis in Pregnancy

By Journal de Commerce.

Chicians are so fond of the frequency the suddenness and the rapid development of appendicitis in pregnancy that they probably make a diagnosis of appendicitis too readily. Pain in the right hypochondrium with contracture and rise of temperature may be found in many different kinds of affections. The author reports five cases where the diagnosis of appendicitis was wrongfully made. In the first there was a Meckel's diverticulum very near the appendix. In the second a dermoid cyst in the ovary was mistaken and extirpated. In the third there was a true cyst of the right ovary. In the fourth was a case of high extra uterine pregnancy the right side coexisting with uterine pregnancy. The fifth was a cyst of the right ovary with a twisted falciform ligament.

Watson J. Three Cases of G. II St. nes Associated with Pregnancy. *G. J. H. p. G. 1941* 11

By Surg Co, et al & Obst

The author recently had as patient three pregnant women who suffered from the most terrible flatulence and indigestion absolutely unrelieved by

psychoses in all cases where the continuance of pregnancy seriously and permanently endangers the mother a psychic condition and where the family physician and the psychiatrist believe that by interrupting the pregnancy the danger to the mother can be avoided. Artificial abortion should be induced more frequently than has heretofore been done in cases of true mental disease. In the severe depression of psychopathic cases institutional treatment is to be preferred to abortion in some cases.

**Benthin W: How Can Bad Results Be Avoided in Febrile Abortions (Wie kann man öfters febrile Aborte vermeiden?)**  
*Deutsche med. Wochenschr.* 1914, 24, 98  
 By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

To avoid severe illness or death in the after treatment of febrile abortions it is necessary to exclude from active treatment the cases complicated by para uterine disease and in which a purposeful examination is necessary. Among such cases were treated actively with 3 deaths and 24 convulsions with 4 deaths.

The bacteriological findings must be taken into consideration for the danger is great if hemolytic streptococci are present. According to the experience of the Hainburg gynecological clinic the results of expectant treatment are much better in such cases than those of active treatment. The danger from retained remnants of the ovum are exaggerated. The permanent result from active and expectant treatment are equally good.

If hemolytic streptococci are present expectant treatment is to be recommended if possible rest in bed, ergotin and diet. For hemorrhage necessitates emptying of the uterus in 10 to 20 per cent of the cases and when necessary it should be done with the finger and as unservicably as possible.

**Fruik and Tunius: The Blood Elements in Pregnancy and Disease (Über das Verhalten der Blattermente im Verlauf der Schwangerschaft und Krankheit)**  
*Läk. Med.* 1914, 4, 120  
 By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The authors give the results of 121 tests of blood sera with 30 different organs as a sign. The blood serum of pregnant women was tested with placenta in 50 cases with 53 positive and 13 negative results of these three reacted positively a second time one came from a woman 6 months after a miscarriage and the third from a woman in the third month of pregnancy. The first two cases were excluded from the results. The results were positive therefore in 94.6 per cent and after the correction in 98 per cent of the cases. The same plasma tested with the same serum 41 times always gave the same results.

The sera from four pregnant women with phthisis, cataplexy, kidney, and also that from a case of hyperemesis gravidarum. The serum of 4 cases

of eclampsia catalyzed the placenta of other cases as well as their own and among the other organs had the strongest effect on the liver. The kidney tissue was not catalyzed. Ten cases of fibromyoma tested with the serum of pregnant patients gave 3 negative and 7 positive results.

The sera of men and non pregnant women with carcinoma was tested in 11 cases. There were positive results in 4 per cent of the cases with carcinomatous organs and 11 positive results in 63 per cent of the cases with placenta. The specificity of the reaction was controlled by 20 experiments with serum from males and 22 cases that were certainly not pregnant in 43 per cent of the cases the placenta was catalyzed.

In discussing methods the authors point out the importance of method in the results, after various unsatisfactory and hydrolytic sera catalyzed various organs. As to the quantity of the reaction they repeated the test after 24 and 48 hours. The first repeated after 24 hours (40 cases) showed positive results in 50 to 60 per cent of the cases that had been positive the first time after 48 hours they were all negative.

**Frankenstein K: Hemorrhage during Pregnancy (Blutungen in der Schwangerschaft)**  
*Fortschr. d. Med.* 1914, 22, 110  
 By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Hemorrhage in the beginning of pregnancy may be the result of general disease of the mother and metrorrhagia of attempt at abortion. There is generally displacement between the ovum and the wall of the uterus, and hemorrhage between the ovum and the mucous membrane or even in the membranes of the ovum. The prognosis as to life is generally good. As to treatment the author recommends emptying of the uterus followed by tamponade.

Among hemorrhages that may occur at any time during pregnancy he counts the hemorrhage resulting from tumors in the uterus and hemorrhage from hydatidiform mole. These endanger the mother's life much more because the hemorrhage is often very severe. The treatment consists in operation for the myom and abortion. If pregnancy is complicated by a tumor, in operable cases total tipitation should be performed at once. In inoperable cases delivery should be accomplished by cesarean section at the end of pregnancy. As soon as the diagnosis of hydatidiform mole is made the uterus should be emptied. After the abortion the patient should be carefully watched to prevent further hemorrhage. After dismissal she should still be kept under observation in order to make an early diagnosis of chorioepithelioma if it appears.

Among hemorrhages in the last three months of pregnancy he counts hemorrhage from varices from rupture of the uterus from placenta praevia and from premature separation of the normally inserted placenta. Both of the latter anomalies are discussed in detail as soon as the diagnosis of

threatening conditions in the mother or child force him to deliver. The methods that can then be used are cesarean section, hebstotomy and craniotomy.

In spite of the fact that the use of forceps is irrational in contracted pelvis they can be recommended for slight degrees of contraction when the conditions are favorable. If an attempt at forceps delivery fails, craniotomy can be resorted to. As only the birth pains can overcome the mechanical resistance without danger, these powers must be allowed to act and even if delivery is very painful morphine must not be given. Rupture of the membranes must be avoided before the os is fully dilated. Nothing is gained by premature rupture of the membranes, and the danger of infection is increased.

In conclusion Meyer gives a review of 28 cases of flat rachitic generally contracted and generally contracted flat pelvises from Oct. 1, 1908 to Sept. 30, 1913. There were 68 cases of spontaneous delivery 53.1 per cent, cesarean section 8.14 per cent, hebstotomy 5, cephalotomy 10, forceps delivery 17, 13.3 per cent, cesarean section and extraction, premature induction of labor 8.

Among the 7 cases of forceps delivery there were several cases of rachitic flat pelvis where the head had already passed the contracted part so it was no longer really a question of delivery from a contracted pelvis and there were also several cases of forceps delivery at the pelvic outlet where delivery would have ended spontaneously if the physician had not been compelled to end it on account of threatening intrauterine asphyxia or some other complication. In several of these cases operative interference would be avoided now by the administration of pituitrin. S. A. GARDENFLOTT

Trey R. de Breech Extraction by Deventer. Mueller's Method (L'extraction d'après la méthode de Deventer Mueller). *J. d. Gynec. et d'obst.* 9, 4, 1914.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. Grenzgeb.

The delivery of the arm by Deventer's Mueller's method has the advantage of making any internal manipulation unnecessary. In the obstetrical clinic at Lausanne it was practiced for this reason followed by delivery of the head by the Prague manipulation. The method is successful in the first and second degrees of contracted pelvis and also with large children. Care must be taken that in the delivery of the body the shoulders occupy the largest diameter of the pelvis. The method is successful in 93.2 per cent of the cases; it fails only in abnormal positions of the arm and in extreme narrowness of the soft part. The infantile mortality is markedly decreased in the old classical method it is 12 per cent in Mueller's method 6 per cent. Fractures of the arm also are decreased from 6.3 to 1 per cent.

Among 8 cases of Mueller's delivery of the arm there were two compound fractures of the cervical

vertebrae. The average time required for extraction by the classical method is 3 minutes by Mueller's method the time is 2.4 minutes. Tears of the perineum are less frequent in the classical method (9.7 per cent) than in Mueller's (15.7 per cent). The author attributes this not to the delivery of the arm but to the Prague manipulation. Rise of temperature is less frequent in Mueller's method (3.5 per cent) than in the classical (36.4 per cent) which is due to the fact that in the former method there is no internal manipulation. JÄGER.

Pierra L. Three Cases of Severe Obstetrical Hemorrhage Treated by Momburg's Method with Success in Two Cases (Trois observations d'hémorragies graves de la délivrance traitées par le procédé de Momburg avec succès dans deux cas). *J. d. Gynec. et d'obst.* 19, 4, 1914.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

The author describes two cases of severe hemorrhage after delivery in which the patient had fainted several times and the radial pulse could hardly be felt, both of which were stopped almost immediately by the application of Momburg's tube. In one case the hemorrhage occurred after a forceps delivery and could not be stopped by an intra-uterine tampon; in the other case the hemorrhage followed a spontaneous delivery. The hemostasis from the tube was so complete that a tear of the perineum could be sutured without a drop of blood flowing. In a third case the method failed because severe heart symptoms appeared when the tube was applied; the patient had mitral insufficiency. She suffered such severe collapse that the tube had to be removed. The hemorrhage was stopped in this case by a tampon. FRA KENNEL.

Maccabruni F. Relation of Syphilis to Dead Macerated Fœtuses (Sifilide e fœti morti macerati). *Atti della Accademia di Medicina di Milano*, 9, 4, 1914.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

After a detailed discussion of the literature in regard to the effect of syphilis on the maceration of the fetus, the author tries to determine the percentage of deaths and maceration of the fetus due to it. In cases of pure maceration he studied the relation between the weight of the fetus and that of the appendages in syphilitic and non-syphilitic cases. He performed 50 experiments and used the Wassermann reaction and demonstrated the spirochetes to show the presence of syphilis. In 21 cases syphilis was demonstrated. In 5 cases a probable diagnosis of syphilis was made. In 24 cases syphilis was excluded as the history, clinical, biological, and bacteriological findings were negative. Among these 24 cases the cause of death was soft knot in the umbilical cord in two cases, premature separation of the placenta in one, anencephalus in one, eclampsia in one, severe albuminuria in 10, and in 9 cases 8 per cent the cause was unknown. Of the seven doubtful cases of syphilis are added to the certain ones, syphilis is the cause









sensitized streptococcal vaccine for prophylactic use in maternity practice.

2 The use of a sensitized polyvalent streptococcal vaccine as a prophylactic is advised in the event of an epidemic of puerperal infection.

3 That doses of 100 250 and 500 millions of this vaccine be given the expectant mother, at forty-eight hour intervals ten to fourteen days before the expected date of confinement.

The author uses dead bacteria in preparing his vaccines C H DAVIS

Gellhorn G: The Management of the Puerperium a Chapter in Preventive Medicine. *La cel Cl N* 1914 CXI 722 By Surg Gynec & Obst

The author discusses the dangers of the puerperium. He criticizes the tendency on the part of some German obstetricians to get their patients up shortly after confinement. These women need rest the length of which should vary according to the needs of the individual cases, but should hardly ever be less than two weeks. Olshausen has stated that 90 per cent of all acquired retroflexions of the uterus originate in the first puerperium. And the author believes that retroflexion of acquired origin constitutes so profound a disturbance in the architecture of the pelvis that sooner or later subjective and objective symptoms will occur in all cases.

The failure of medical men to agree on a higher standard of obstetrical service and a higher remuneration, the author thinks has helped to confirm in the minds of the public the belief that parturition is a more or less negligible condition. As a result our hospitals are filled with women and most of the operations are done to correct disorders which in their last analysis are due to failures of obstetrics.

C H DAVIS

Fabre and Dujol: Influence of Gonorrhoea on the Puerperium (Influence de la gonococcie sur le puerperin immédiate) *Bull Soc Obst et Gynec* 9 4 1900

By Zentralbl f d. ges. Gynak. u. Geburtsh. u. d. Grenzgeb.

The author believes the harmfulness of gonorrhoea is exaggerated. Every disease of the puerperium that occurs in a suspected gonorrhoea case cannot be attributed to gonococci, often streptococci are the cause. The severe cases may be recognized by (1) purulent lochia in which gonococci are found (2) delayed involution of the uterus (3) irregular and generally moderate fever (4) a quickened pulse and very good general condition. Severe consequences only follow when the woman has had a fresh and severe gonorrhoeal infection shortly before delivery or when there are injuries of the parametrium.

Among 600 pregnant women the author found a suspicion of gonorrhoea in 3. 22 of whom gonorrhoea could be demonstrated clinically and bacteriologically. Ten of them had no rise of temperature during the puerperium. Of nine women who showed only the clinical signs of gonorrhoea

two had fever. Complications due to gonorrhoea therefore occurred in only 5 per cent of his patients during the puerperium as contrasted with 25 per cent given by other authors. JAEGER

## MISCELLANEOUS

Schottlaender J: Theory of Abderhalden's Pregnancy Reaction and Remarks on the Internal Secretion of the Female Genitalia; Consideration of Morphological Principles (Zur Theorie der Abderhaldenschen Schwangerschaftsreaktion, sowie Anmerkungen über die innere Sekretion des weiblichen Genitales. Erwägungen a. l. morphologischer Grundlage) *Zentralbl. f. Gynak.* 1914

XXVII 425  
By Zentralbl. f. d. ges. Gynak. u. Geburtsh. u. d. Grenzgeb.

The author discusses the question of whether new points of view may not be discovered with respect to the source of the protective ferments in the pregnancy reaction as paradoxical reactions in some cases of tumors of the adnexa, carcinoma, and myoma cannot be explained in the usual way. He believes that the decidua is involved either alone or to a considerable extent. Behne has shown that in pregnant cows the maternal and fetal parts of the placenta are catabolized separately and Deutsch and Kohler found catabolism of the decidua in five cases in human beings in this the deportation of villi does not play a very important part. The direct contact of the fetal epithelium with the maternal vessels disappears early in pregnancy. The material originating in it reach the maternal blood via the decidua.

As the chorionic villi normally disappear soon after delivery and as protective ferments can be demonstrated 14 to 21 days after delivery, decidual elements may be active. It remains to be shown by systematic research whether the ferment reaction persists longer after abortions, and whether it is particularly strong in cases of hydatidiform mole and chorio-epithelioma. The intermenstrual period is analogous to pregnancy. The theca lutein cells in the ovaries are especially well developed at this time. Decidua cells appear outside the uterus, in inflammatory conditions, during the antenatal period. The fact that theca lutein cells like decidua cells always seem to appear when the epithelial cells of the corpus luteum seem to have exceeded the maximum of secretion and the fact that decidua cells are found in inflamed ovarian cysts seem to indicate that the two kinds of cells have a close mutual connection. The decidua, not the pregnancy is responsible for the persistence of the corpus luteum. In patients with amenorrhoea the development of an antenatal status must be considered. The fact that a positive pregnancy reaction was found in patients with amenorrhoea is perhaps to be explained by the fact that, when there was hyperfunction of the ovaries an antenatal status was brought about but in patients with hypofunction it was probably explained by the

presence of theca lutea cells. The further consequence of this would be that sometimes there would be catabolism of the placenta in girls just before puberty. **BEHRMAN**

**Zwiefel Herff Hofmeier and Others** Significance of Abderhalden's Reaction in Obstetrics and Gynecology (Umfrage über die Bedeutung der Abderhaldenschen Untersuchungsmethoden für die Geburtshilfe und Gynäkologie) *Med. Kl.* Berl. 19 4, 2, 453.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A series of questions was sent out with a view of getting an idea of the importance of Abderhalden's method in obstetrics and gynecology. The questions were: (1) What results have you obtained in your clinic with Abderhalden's method? (2) Is the method practical? (3) From your experience what is the general value of research in the direction inaugurated by Abderhalden?

Fifteen university clinics answered the questions in detail and gave the number of cases they had examined. Twelve reported excellent results among them Zwiefel's, Herff's, Hofmeier's and Kroener's clinics. Bumm's, Stoeckel's, and Menge's had less favorable results. The majority of the investigators agreed that the method which gives its best results only in skillful and experienced hands is of great practical value and even indispensable in differential diagnosis. Some of the individual cases demonstrate this for instance one from Winter's clinic where it was necessary to make a differential diagnosis between ectopic pregnancy and inflammatory disease of the adnexa. Abderhalden's reaction was negative and operation confirmed this result. A similar case is reported from Zangemeister's clinic where it was necessary to make a differential diagnosis between tubal pregnancy and tumor of the adnexa. Abderhalden's reaction was negative twice and operation showed a tumor of the adnexa. All were agreed in answer to the last question that the research opened up by Abderhalden offers the most unusual prospects.

**WUNDERLICH**

**Krupski A. I.** The Clinical Value of the Abderhalden Reaction (Der klinische Wert der Abderhaldenschen Reaktion) *Russk. Vrach.* 9 4, 225.

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The author has used the Abderhalden reaction in over 600 cases among those examined were normal and eclamptic pregnant women, women during the puerperium and after abortion and non-pregnant women. It was also used in 10 cases of cancer. The results cannot be given in detail. The author finds that the reaction is positive in different classes of cases for instance, in pregnancy and malignant tumors. He also finds that it is always positive in pregnancy even in a very early stage. He thinks this fact is of great importance for the diagnosis of pregnancy in the first

weeks or even months is often very difficult. More over the reaction remains positive for two weeks after delivery or abortion. This has practical value in clinical work and in legal medicine. The author believes that this is the extent of the value of the reaction for the present. **VO HOUY**

**Esbensen L. A.** Use of Extract of Hypophysis in Obstetrics (Der Hypophysenextrakt in der Geburtshilfe) *Ugeskr. f. Læger* 19 4, 15, 635.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Esbensen has collected 166 cases in which extract of hypophysis was used, pituitrin being used in some of the cases and pituitadon in others. He prefers pituitrin. From his examination of the material he comes to the following conclusions:

1. Extract of hypophysis produces or strengthens the contractions in most cases. The contractions appear rhythmically with pauses between them.

2. It cannot be assumed that the contractions caused by extract of hypophysis are not similar to the physiological ones because the pressure rises in the pauses between the pains; this occurs in the ordinary pains when they become stronger.

3. Abortion cannot be caused by it.

4. It has the same effect in prematurity as in normal delivery if labor is in progress.

5. In full term delivery it acts best during the second stage.

6. Good contractions are not made better by extract of hypophysis but neither are they made tetanic.

7. The remedy has a regulating effect on painful contractions that are not producing any effect.

8. It seems to prevent rise of temperature at least to any considerable degree.

9. It did not cause post partum atony in any case.

10. It is not dangerous for the child.

11. Heart disease is not a contra-indication to its use; neither is albuminuria nor slight nephritis.

12. It should not be used in threatened eclampsia. **S. A. GAMMELTORT**

**Bertolini G.** Use of Extract of Hypophysis in Obstetrics (L'uso del pus polifarn in ostetricia) *Fol. ginec.* 9 4, 15, 47.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

After a discussion of the literature the author reports his own results in 43 cases. He used extract of hypophysis made by different firms in cases of abortion, premature delivery, contracted pelvis, placenta previa, atony in the first and second stages, post partum atony as a prophylactic in overdistention of the uterus and in: trapezius hemorrhage. He had different complications such as spasm of the cervix, dangerous tetanic contractions, once even fatal asphyxia of the fetus and severe hemorrhage in the third stage. In other cases the remedy failed or the results were so unsatisfactory that operative measures could not be avoided. In cases of atony and sometimes in other cases also there was a good

effect and in one case the use of forceps was avoided. He has no great enthusiasm for the remedy and thinks that as it is rather dangerous it should not be placed in the hands of inexperienced practitioners and midwives. A. I. UCHS

Oertel C. Laudanum in Obstetrics (Laudanum in der Geburtshilfe) *München med Wchnscr* 1914 1 1, 694

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb

Most of the alkaloids contained in opium are not necessary to produce the full effect of opium; they are unnecessary ballast. Some of them, however, are very useful. Thebaine, for example, inhibits the paralyzing effect on the respiratory center, stimulates it in fact and decreases the irritability of the vomiting center.

Laudanum I, an opium preparation tested by Faust, contains 6 opium alkaloids: morphine, narcotine, codeine, papaverine, thebaine, and narceine. Laudanum II, which has about the same effect, has the same constituents but contains less narcotine, papaverine, and narceine.

The author tested Laudanum on 4 women and 43 found that the pain was markedly decreased and especially so in a case of septic metrorrhagia. In 32 of 33 women the second stage and the delivery was rendered less painful in some cases free from pain. But two cases which had been given pituitadon shortly before the contractions stopped, gained completely. Almost all the children cried immediately after delivery; in only one case artificial respiration had to be carried on for 15 minutes on account of paralysis of the respiratory center.

No unpleasant by-effects were observed in the mothers, in spite of the fact that some of them were given as much as 6 ccm of laudanum. One ccm of laudanum was given intramuscularly; the first effect becoming perceptible five minutes, it was complete after 30 minutes and lasted two hours, when if necessary another ccm was injected. Women who had not been given laudanum before were given 2 ccm at once one half hour before delivery was expected.

Laudanum has proved of value in eclampsia also; 1 ccm quieted the mothers so that delivery could be completed without injury to mother or child. EMERSON

Acconci G. Pathological Anatomy of the Placenta II. Albuminuria (Ricerche sull'anatomia patologica della placenta. Nota Alb. minor) *Fel ginec* 9 4 12

By Zentralbl f d ges Gynäk Geburtsh s d Grenzgeb

The author has demonstrated changes in the placenta in eclampsia and in pregnant women with albuminuria; he regards these as the anatomical substratum of these auto-intoxications. In women with chronic nephritis, however, an acute exacerbation there are generally changes in the vessels while in the toxemias of pregnancy there is intense atypical

proliferation of the syncytium which penetrates the villi themselves and leads to deformity and nodulation of the villi. In other cases conglomerations of villi are formed that lead to stases and disturbances of circulation in the subdecidua by degeneration and proliferation, fibrin formation and stratification and in conjunction with separation and destruction of the syncytium cause the formation of nodules in the placenta. The destruction of placental tissue and the passage of these placental substances into the blood causes the well-known symptoms of intoxication: changes in the blood, the vessels, the liver and the kidneys. Renewed and stronger hemorrhages are caused in the placenta and basal decidua by the hypertension of the arteries and the increased blood pressure. WEISSHAUPT

Lampe, Arno E. and Fuhs R.: The Action of the Blood Serum of Normal and Diseased Individuals on Placental Albumin (Über das Verhalten des Bluteserums Gesunder und Kranker gegenüber Placentalalbumin) *Deut med Wchnscr* 19 4 21

By Zentralbl f d ges Gynäk u Geburtsh s d Grenzgeb

In contrast with the findings of Michaelis and Lagermarck, the experiments of the authors with sera of different origin from pregnant and non-pregnant male and female individuals shows that placental albumin is catabolized only by the serum of pregnant women and that this reaction is therefore strictly specific as held by Abderhalden. In thousands of non-pregnant cases no ferment was ever demonstrated that acted on placental albumin. One or two rare exceptions to this rule do not justify the conclusion that the protective ferments are not specific but should only stimulate an interest in further ferment studies. B. A.

Zwiefel E. Experiments in Influencing the Bacterial Content of the Vagina in Pregnancy by Medicinal Irrigations (Versuche zur Beeinflussung des Bakteriengehaltes der Scheide Schwangerer durch medikamentöse Spülungen) *M. natserh Geburtsh u Gyn* 18 9 4 2244 459

By Zentralbl f d ges Gynäk Geburtsh s d Grenzgeb

The author experimented as to the possibility of influencing the quality of the vaginal flora by irrigation with different disinfectant solutions. He describes the technique of his experiments. There was a decrease in the bacteria, which did not last very long, by irrigations with solutions of oxymercure bichloride, lysoform, and potassium permanganate. The number of cocci was decreased and the resistance of the vaginal bacilli to the irrigating solutions increased after a time the cocci reappeared as before. After three days lysoform irrigation the number of vaginal bacteria was about the same as at the beginning. With a 1 per cent silver nitrate solution there was a marked decrease in the cocci.

Packing the vagina with iodine solution and the application of alcohol tampons were used as de-

crease in the bacteria, but the number of cases was too small to draw definite conclusions. Directly unfavorable results were obtained by irrigations with distilled water boric acid and aluminum acetate, there was an increase in the bacterial content and the proportion of cocci to bacilli was increased that is there was a relative increase in the pathogenic bacteria. With the bolus treatment there was a disappearance of the discharge during the treatment the bacteriological results were unsatisfactory.

There were good results from a ten-day irrigation with a one-half per cent lactic acid solution. Irrigations with bichloride oxycyanate potassium permanganate and silver nitrate solutions are to be recommended for pregnant women who have a pathological secretion shortly before or during delivery. There should first be a mechanical cleansing of the vagina from bacteria with 1 to 2 liters of salt solution, then irrigation with 100 to 200 ccm. of 1:2000 bichloride solution. This should be used only when bacteriological examination has shown a pathological secretion. The question still remains open whether only cases with streptococcus pyogenes should be irrigated or whether those with staphylococci or other species of bacteria should also be irrigated. In normal patients with normal secretion these medicinal irrigations are entirely superfluous they are certainly not necessary and may even be harmful even lactic acid irrigations can be dispensed with. MORALLER.

Wallich V and Abram, P: *Changes in the Blood in Anemia from Obstetrical Hemorrhages* (Des modifications du sang dans les anémies par hémorragies obstétricales) *Ann. de Gynéc. et Obst.* Par. 4: 24, 72.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Two forms are to be distinguished (1) Hemorrhages setting in suddenly and violently (2) those setting in gradually and lasting for a long time. The authors endeavored to determine certain indications for treatment. Increase in the rapidity of the pulse is a useful measure of the strength and dangerousness of the anemia and runs parallel to changes in its degree—blood pressure is of less significance in this direction.

By animal experimentation the authors studied the reparative strength of the body and the changes in the blood-picture connected with it and came to the following conclusions: (1) Blood pressure is of no value in prognosis. (2) Increase in rapidity of the pulse is of more value, but not of decisive value without the blood picture which is the most important factor in prognosis. The number of erythrocytes shows the degree of loss of blood but does not denote the degree of resistance of the body to this loss.

The authors believe that the resistance and the capacity of the body to react to loss of blood can be judged by the following symptoms. In the first grade where there is strong resistance repair is shown

by the inequality in the diameter of erythrocytes, the presence of blood-cells containing granules, and polychromatophils. In the second grade, there is less reaction, and in addition to the foregoing symptoms there is poikilocytosis. In the third grade the last reserve forces of the body are called into action and nucleated red blood-cells appear.

HARAZ.

Stolper L.: *Etiology and Diagnosis of Hyperemesis Gravidarum* (Zur Ätiologie und Diagnose der Hyperemesis gravidarum) *G. d. R. d. Gynäk.* 1914 v. 85.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Hyperemesis is a toxicosis caused by cells originating from the periphery of the ovum and circulating in the blood. Hyperemesis is distinguished from normal pregnancy by the fact that the disintoxicating mechanism of the body is affected or more rarely that there is an increase in the amount of cell toxins circulating in the blood. The mechanism of disintoxication is to be sure not thoroughly understood but the liver the corpus luteum, later the interstitial glands, and the placenta take part in it.

The author believes that the hormones of the above-named glands with internal secretion, and perhaps others also act through the liver as a center so that hyperemesis is not an expression of insufficiency of the liver but of the organs which affect disintoxication, especially many of the glands with internal secretion. In diagnosis he thinks the determination of disturbance of sugar assimilation is important. It is a symptom which is to be attributed to the toxemia of pregnancy caused either by the deficiency in ovarian function especially that of the corpus luteum by a hypersecretiveness of the kidneys to sugar in the blood or even by inanition. HARRIS.

Lutz, W. *General Dropsy of the New-Born* (Zur Lehre der allgemeinen Wasserschwellung des Neugeborenen) *Cw. Bl. f. schwed. Ärzte* 1914 Nr. 139.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author describes a case of general fetal dropsy. The mother had albumin and marked edema. The Wassermann test was negative in both mother and child. The placenta was very large. Autopsy and histological findings are given in detail. The author attributes this case to blood disease in the fetus with general hydrops. The blood-picture is very similar to but not identical with that of myeloid leukemia, and the abundance of nucleated red cells is probably to be regarded as a special type of reaction of the blood-forming organs of the fetus. The edema was probably caused by hypertrophy of the heart, and to some extent also by injury to the capillary walls as a result of the extreme changes in the blood. The two factors together hypertrophy of the heart and injury to the vessels, would explain the edema. But cases of edema without blood alterations show that there must be other factors in

the genesis of edema. The author distinguishes two groups of edema in the new born: those with and those without changes in the blood. Possibly the same hypothetical toxin causes both groups.

EISENBACK.

**Fuchs:** Resuscitation of the New Born by Werth's Handkerchief Movement (Zur Wiederbelebung Neugeborener mittels des Werth'schen Schnupfruchmadovers). *Monat chr f Geburtsh u Gyn* 1914, xxxix 567

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

With the child held in a hanging position by the thighs with the right hand while the left hand supports the neck, the knees are brought up to the left cheek by strong compression of the abdomen and thorax and wiped forcibly over the mouth and nostrils in the manner of a handkerchief. This causes a very strong expiration and the discharge of the mucous in the upper air passages. Then the child is laid down horizontally and the spinal column hyperextended which causes inspiration but the results of this method are not so good, so that it is best suited to cases of mild asphyxia in which the aspiration of mucous is the chief factor.

RUBENMAN.

**Geipel:** A Case of Total Anuria (Ein Fall von totaler Anurie). *Zentralbl. f. Gyn* 1914, xxxv 57

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A 3-year-old girl had premature separation of the placenta and a 7-months fetus was delivered after dilatation with Bossi's dilators. After the delivery there was absolute anuria which caused death after four and one-half days toward the end there were symptoms of uræmia and albuminuric retinitis. Autopsy showed extensive necrosis of the cortex of both kidneys. A detailed description of the microscopic findings is given. The interlobular arteries showed extensive thrombi, little distance from the necrosis, and the beginning of the thrombi was central. Though there were no other symptoms of eclampsia must have been the cause of the condition.

RUBENMAN.

**Geipel:** Presence of Decidual Tissue in the Lymph Glands (E. Beitrag zum Vorkommen des deciduellen Gewebes in den Lymphdrüsen). *Zentralbl. f. Gyn* 1914, xxxv 51

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The first observation of this kind was made in a patient with severe anemia who died in the second half of pregnancy. In addition to the extensive decidua proliferant, the Douglas pouch and the lower third of the omentum, decidual proliferation was found for the first time in the pelvic lymph glands. The cortical sinus was chiefly involved in the more extensive proliferations which in almost one-fourth of the gland the decidual tissue extended toward the center between the follicles and compressed them. There was no connection with the peritoneum. In the systematic examination of two other cases only

one gland was found in one of them that showed a focus of decidual transformation. This proliferation represents a specific reaction of pregnancy.

RUBENMAN.

**Turner J:** Use of Momburg's Elastic Constriction and Gauss's Compressor in Obstetrics (Über Anwendung der elastischen Konstriktion nach Momburg und des Gaus'schen Kompressoriums bei der Geburtshilfe). *Cas. lek. čes. 1914*, lxxv 89

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author first gives a historical review of the compression of the abdominal aorta in obstetrics and the physiological and clinical experiments performed along this line. Results from 50 cases from Rubeska's obstetrical clinic show that in 92 per cent of the cases the hemorrhage was completely stopped. Objectively there was a marked alteration in the pulse in five cases, no unfavorable or injurious effect was observed either in the organs subjected to the direct pressure of the elastic tube or in other more distant ones. There were no late effects during the puerperium.

Subjectively the constriction was well borne in most cases in five cases it had to be discontinued because the patients found it unbearable. There were two cases of death among the 50 cases once because compression was applied too late and the other occurred suddenly six hours after delivery—in this case autopsy did not show any connection between the constriction and the death.

Gauss's compressor was used successfully in ten cases. There were no objective or subjective symptoms following it. There was one death from streptococcal sepsis. Momburg's compression can be used in suitable cases and with certain precautions in private practice and both methods can be used with good results in the hospital.

PATEKA.

**Jilin F:** Air Embolus in Obstetrics (Die Luftembolie der Geburtshilfe). *J. k. k. u. j. nsk. bolsh. St. Peterb.* 1914, lxxv 34

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

His experimental study of air embolism caused the author to undertake a critical review of the cases published in obstetrical literature. He recognized only three cases as authentic, one each of Olshausen, Swanbourne and Litzmann.

The remaining cases were only probable diagnoses or they must be rejected because either the clinical or the pathological anatomical evidences of air embolism were not sufficient. This is true of most of Olshausen's cases. The danger of obstetrical air embolism is very much exaggerated and the textbook figures as to its frequency should be corrected.

Only an autopsy undertaken with the necessary care with complete macroscopic and microscopic examination of the organs, should be regarded as sufficient evidence for a diagnosis of air embolism.

HARR.

**Knoop Gummert and Bach** Dangers of the Use of Intra Uterine Methods of Preventing Conception (*Über die Gefahren der intrauterin angewendeten antikonzeptionellen Mittel*) *Wissenschaft u. Gynäk.* 1914, xxxv, 406.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

According to Knoop the decline in the birth rate is not caused by a decrease in marriages, a decrease in fertility or an increase in venereal diseases, but by a voluntary limitation of the number of children. It is caused to a slight degree by continence in marriage but chiefly by measures taken to prevent conception or by abortion. Women generally use vaginal or intra uterine appliances for preventing conception. In the vagina they use sponges, and occlusion pessaries of rubber, gold, and silver. All these things when used for a long time cause stasis of the uterine secretion, irritation of the vagina and vaginal and uterine catarrh. Much more harmful, however, are probes and intra uterine syringes.

The syringe is extensively used in Germany for the purpose of producing abortion. If the fluid generally employed is a solution of acetic acid or lysol,

is injected at too high pressure it penetrates the abdominal cavity and causes mild or severe disease. It may cause perforation of the uterus, Douglas's pouch and the bladder.

Intra uterine pessaries were formerly used therapeutically to correct malpositions of the uterus, but later they were recognized as dangerous and replaced by external pessaries. In the most favorable cases the intra uterine pessary causes catarrh of the uterus, and in some cases, it has caused hemorrhage, simple and purulent discharges, parametritis, perimetritis, pyosalpingitis, perforation of the uterus, and death. The sale, use and manufacture of the so-called maternal syringes should be forbidden; the probe should not be displayed in show windows, advertised or sold to the laity.

GUMMERT says more women lose their lives to-day as the result of the use of probes and syringes to prevent conception and produce abortion than ever died from labor.

BACH discusses the medico-legal questions involved in the sale, advertisement and use of means of preventing conception and producing abortion under the German law.

F. H. B. B. B.



# GENITO-URINARY SURGERY

## KIDNEY AND URETER

Souchon E. The Philologic Anatomy of the Kidneys. *Y Or M J* 19 4 LXVI, 833.  
By Surg Gynec & Obst.

The author describes the anatomy of the kidneys in a very entertaining manner laying special stress on the fact that the kidney is very loosely situated but still fixed also that the kidney like the brain throbs when held in the hand. One of the unique anatomic facts is the presence of the adipose capsule the purpose of which is protection. The histologic arrangement of the kidney lucidly described and the relation of the anatomy of the organ to its physiology is thoroughly brought out.

By D. L. B. 1911

Das L. Calculous Anuria with Report of Two Cases. *S J G* 19 4 LXVI, 836.  
By Surg Gynec & Obst.

Two cases of successful operation for calculous anuria are reported.

In one case of sixty hours duration nephrotomy was done with spontaneous passage of stones late. This was a case of solitary kidney. In the other case there was anuria of 12 days duration. A kidney completely destroyed by tuberculosis was removed on the right side and, at the same sitting a nephrotomy was performed on the left for obstruction of the renal outlet by stone.

In a critical analysis of calculous anuria recorded in the literature the view is expressed that the few cases cited as example of reflex inhibition of an unobstructed but more or less diseased kidney as a result of calculous obstruction of its fellow are to be explained more correctly as the functional failure of a sound organ. Concerning post mortem histologic experimental and even clinical evidence of reflex inhibition of a sound kidney as a result of calculous obstruction of its fellow is lacking.

Calculous anuria should be considered and treated purely a mechanical problem. Pyelotomy when practicable is to be preferred to nephrotomy. The removal of the stone is an ideal to be attained whenever possible. Bilateral operation is indicated whenever the kidney first cut down upon is inadequate by itself to sustain the work of elimination of the body. It naturally follows that the bilateral operation should be performed whenever the kidney first cut down upon is apparently unobstructed.

Boland, F. K. Injuries of the Kidney. *U S J* 19 4 LXVI, 837.  
By Surg Gynec & Obst.

This paper is practically a review of the more exhaustive report of traumas of the kidney. The

author states that in 40 per cent of cutaneous injuries to abdominal viscera the kidney is the one affected and that in 60 per cent of such cases hematuria is a prominent symptom. In 1903 Watson, of Boston reported 660 cases in 20 cases of which blow or falls upon the front of the abdomen are stated to have been the cause of laceration of the kidney and in all but two of them this was the sole result of the accident. Blood in the urine is the most constant and of course most characteristic sign—the hematuria however may be slight or absent. If only the capsule of the kidney is torn blood will not appear or in very severe injuries where the ureter is torn across it becomes clogged with blood clots and the quantity may be small microscopic or entirely absent.

Sepsis is the greatest danger after hemorrhage has occurred in Watson's series in 68 of 486 cases. The vein was found torn in 14 of the same author's cases and the artery once. In 4 of 660 cases only one kidney was present. This proportion will be noted to be much higher than that usually given for this anomaly. According to the statistics of European clinics one kidney is absent in every two thousand persons.

Peritonitis is an infrequent complication. The author's quotation from Tuffier is worth repeating namely that this capable experimenter and surgeon has demonstrated by experimentation on animals that no urine flow from the surface of lacerated renal wounds and that in order to have urinary extravasation under such circumstances the renal pelvis or one of the calyces must stand in communication with the renal surface through the wound. Also the same experimenter has shown that the introduction of urine into the peritoneal cavity does not cause peritonitis provided the introduction is made gradually, once or even repeatedly and intercalated sufficient length are allowed between the different introductions whereas if the flow is continuous the contrary is the case.

Watson's figures show a mortality of 27 per cent in cases treated expectantly, 10 per cent in cases treated by operation, but than nephrectomy and 25 per cent in cases treated by nephrectomy.

1911 S. Hall.

Azars P. Total Gangrene of the Right Kidney Secondary to a Perinephritic Phlegmon (Gangrène totale d'un rein droit secondaire à un phlegmon périnephrique). *Gaz. d. P.* 1914 XXXI, 633.  
By Journal de Chirurgie.

A patient of 31 had had a severe burn of the neck and right arm at three years of age. She men-  
struated at 16 and had three normal

pregnancies. Six months after the first delivery she began to have a swelling of the leg the eyelids and the upper extremities. A diagnosis of nephritis was made and a milk diet prescribed. At the end of two months there was still a little albumin.

In January 1914 the edema reappeared and was especially marked in the right leg which had a cyanotic tint there was pain in the abdomen, more severe on the right side and irradiating into the lumbodorsal region of that side. The temperature was 38.5° pulse 100 her general state of nutrition was poor. The urine showed albumin 9 per 1,000 cylinders, red cells and leucocytes. The abdomen was distended with gas and the abdominal veins showed supplementary vascularization. Bimanual palpation of the right flank showed a hard resistant smooth oval mass with indistinct boundaries. The dullness passed into the hepatic dullness. The diagnosis was chronic nephritis with right perinephritis. There were symptoms of compression of the large veins and threatened gangrene of the right lower limb. Operation was performed Feb. 4, 1914. Lumbar incision showed a mass surrounding the right kidney the volume of which explained the stasis in the right leg. Incision was followed by perinephritic phlegmon. A tampon was used. For a few days there was a fetid discharge and on the twelfth day necrosis of the whole kidney was discovered. Extirpation of the organ was accomplished without hemorrhage. The recovery was without fever but with persistence of a small quantity of albumin. The author believes the necrosis was due to the compression of the vessels of the kidney by the perinephritis. The lower limb was also threatened with gangrene from compression of the right iliac vessels. C. L. LEA, D.D.

Ramsey W. R.: Infections of the Urinary Tract in Infants. *St. Paul M. J.* 1914, v. 343.  
By Surg. Gynec. & Obst.

In this second report the author adds 100 cases to a series of 60 that he reported a short time ago. In ninety per cent of all cases the infection was due to the colon bacillus. Quoting Goppert he states that one to one and one-half per cent of the infants brought to his clinic suffered from infections of the urinary tract ten per cent being in boys, and ninety per cent in girls. He also adds a series of 20 cases of urinary infection resulting from a diplococcus resembling the pneumococcus, details of which he will report later. Most of the acute cases apparently recover completely but are prone to relapse. Pfouder discovered that the blood from cases of fever from acute infection with the colon bacillus was able to produce clumping of the bacilli just as the blood after the method of Vidal produces clumping of the typhoid bacilli. The immunity however from one attack is very transient since reinfections occur so promptly. Fortunately, chronic infections are much less common than the acute variety. Several of the acute cases seen five years previously however are not chronic. They assume

the form of a chronic bacteriuria with more or less local irritation. Pathologically Ricker's findings were few in comparison with the severity of the symptoms. The records from microscopic examinations of the mucous membranes were usually negative. This included the mucosa and submucosa of the pelvis kidney ureters and bladder.

Reviewing the work of Hinman the author points out the futility of the use of hexamethylenamine, particularly in those cases where the kidney is involved. In chronic cases of bacteriuria the author thinks the prognosis ultimately bad.

IRWIN S. KOLL.

Stammier A.: Study of Aberrant, Supernumerary Ureter (Zur Kenntnis der aberranten, überzähligen Ureter). *Ztschr. f. urol. Chir.* 1914, v. 341.  
By Zentralbl. d. ges. Chir. u. L. Grenzgeb.

A 15 year old girl had had the habit of bed-wetting. Examination showed two aberrant supernumerary ureters which opened into the vagina just back of the introitus. After a careful functional test and a thorough examination with the cystoscope and a collargol roentgen picture it was found that in accordance with Weigert's rule the ureter emptying lowest down crossed the other and led to a separate pelvis in the upper half of the kidney. The urine of the supernumerary ureters was not infected.

Kümmel operated as follows with complete recovery. The right kidney was laid bare the supernumerary ureter was sectioned and an anastomosis formed between the separate pelves. On the left side the supernumerary ureter was ligated off and a part of the upper half of the corresponding kidney resected. The formation of an anastomosis was not advisable in account of the small size of the upper pelvis. The girl is now free from symptoms. OENLACKER.

Rolando, S. Intra-oesophageal Excision of Large Papillomata Implanted Around the Ureters (Sur l'extirpation dans la vessie des papillomes volumineux à implantation pério-urétrale). *J. Chir.* 1914, v. 345.  
By Journal de Chirurgie.

When a rather large new growth implanted around the ureters is to be removed it is advantageous to perform catheterization of the corresponding ureter either by cystoscopy or through the opened bladder. A search for the meatus may be unsuccessful and if so it is advisable to destroy the tumor without regard to the ureter as experience has shown that the results are generally normal. Nevertheless it is preferable to find the meatus of the ureter. In order to accomplish this Rolando recommends the following procedure which he has used successfully in two cases. If after opening and resection of the bladder the meatus is not found, the surgeon should remove the tumor after ligating it above the implantation of the pedicle. The removal may be executed with the thermo or galvanocautery or if it has been well ligated, with the scissors.

Hæmorrhage having been accomplished the meatus of the ureter may be found without difficulty whatever its position. The operation is then completed by removing the pedicle and safeguarding the opening of the ureter.

J. TAYLOR

# BLADDER, URETHRA, AND PENIS

Simpson T. Y. A Case of Ectopia Vesicæ in which the Ureters were Grafted Successfully into the Rectum. *Brit. Med. J.* 1914, 1, 2, 3.

By Surg. Gynec. & Obst.

The author had as a patient a girl aged eight years who had ectopia vesicæ; the symphysis pubis was absent and there was a bulging of the posterior bladder wall.

After liberating the bladder Simpson inserted a catheter into each ureter. The bladder was resected down to the trigonum, then dividing the triangular ligament the lower end of each ureter was turned back into the vagina in close proximity to the anterior rectal wall. Through a rectovaginal incision the catheters and ureters were inserted into the rectum and the free edges of the rectovaginal incision sutured to the ureters. After seven days the catheters which protruded from the anus were withdrawn. The patient is now able to hold urine in the rectum for several hours. The whole procedure is based upon the principles of the Maydl operation.

HARRY KEATS

J. Houston J. A. Lixtophy of the Bladder. *Lancet* 1914, 2, 1, 2, 3.

By Surg. Gynec. & Obst.

The author reports the case of a woman thirty years old whose posterior bladder wall was almost flush with the skin surface. The opening was two and one half inches in diameter, quite red and exuded thick mucus. The urine came from the left ureter only. There was no urethra and the pubic bones were one and one half inches apart. Two previous plastic operations having failed the Maydl operation was performed upon the left ureter. Nothing was done with the right ureter. No urine appeared at that time. Now three years after the operation was performed the patient voids urine once or twice in the night and every one to three hours during the day. Her general health is not as good as before the operation.

The author advises that a suitable apparatus made of German silver be worn by the patient in reference to operation. He also urges that the patients be immunized against colon bacilli before transplantation of the ureters.

HARRY KEATS

Claybrook, E. B. A Simple Method of Bladder Drainage. *Old Dominion J.* 1914, 1, 2, 3.

By Surg. Gynec. & Obst.

In acute retention of urine due to stricture or hypertrophy of the prostate and other causes, when it is impossible to pass the catheter the

author advocates the use of a good trocar suprapubically to avoid repetition of tapping with the usual needle instead.

As soon as the puncture into the bladder is made the stylet is withdrawn and a soft rubber catheter slipped in through the sleeve into the bladder and left in place withdrawing the sleeve carefully over the catheter. A strip of adhesive is then given a turn around the catheter and the two free ends fastened down to the skin. The catheter is left in the bladder until the necessary treatment to remove the obstruction is carried out.

Bladder irrigations through the catheter may be carried on when indicated. THEO. DROZOWITZ

Veau V. Total Rupture of the Urethra in a Child of Eleven; Circular Suture Cystostomy Recovery without Stricture. (Rupture totale de l'urètre chez un enfant de 11 ans. Cure circulaire cystostomie guérison sans rétrécissement.) *Bull. et Mém. Soc. de Chir. de Par.* 1914, 1, 544.

By Journal de Chirurgie.

Veau reports the case of a young boy who fell astride the back of a chair and showed all the signs of rupture of the urethra: discharge of blood through the meatus; retention of urine with distention of the bladder; perineal ecchymosis. Operation which was performed 16 hours after the accident verified the diagnosis. The two ends were easily brought together and sutured circularly; the suburethral tissues were brought together and the perineal wound left open with a drain. Suprapubic cystostomy was then performed and a large No. 30 drain placed in the bladder. The results were good. The perineal wound cicatrized in ten days without suppuration; the urine passing through the bladder drain. This drain was then removed and the patient untroubled through the meatus from the twelfth day. A very small hypogastric fistula occasionally discharging a few drops of urine persisted for 16 months. Since then micturition has been entirely normal. There is no stricture.

MAIRION took occasion to review the late result of his own case of repair of the ruptured urethra by the method to which his name has been given. In all of the cases subsequent examination has shown that there was no stricture of the urethra. The examinations were made three to six months after the operations. In two cases there was dislocation of the urethra so that no instrument could be introduced unless guided by a conducting bougie; but as soon as the bougie was introduced the canal was found to be of normal size. He reviews his method of repairing the ruptured urethra which is the same as that described in the operation above.

LEGUE confirmed what Mairion had said. His method has marked a great advance in the treatment of traumatism and rupture of the urethra; there is only one contra-indication—that is when the loss of substance is so great as to prevent suture. In such cases urethral autoplasty must be performed.

J. DUMONT

Marion G: Lat Results of Circular Ureth or raphy Followed by Derivation in Rupture and Traumatic Stricture of the Urethra (Résultats éloignés des urethrotomies circulaires su ies de dérivation dans les ruptures et les rétrécissements traumatiques de l'urètre) *J d. M.* 914, p 533.

By Journal de Chirurgie

Marion reports the late results of the operation which he and Heitz-Boyer have used since 1900. They have made certain modifications in the method resulting from experience. The penneal urethrotomy for derivation of the urine has been advantageously replaced by cystostomy which is easier especially when the urethral lesion is near the middle aponeurosis it never gives a fistula and it allows of retrograde catheterization. The cystostomy is performed first before operating on the perineum as it is easier to find the posterior end of the urethra after retrograde catheterization which is practiced immediately.

The repair of the urethra should be preceded by discrete freshening of the contused ends of the urethra extensive resection may prevent the sutures from holding. In case of extensive destruction of the urethra it is preferable to follow the old method of repair around a sound and secondary resection of the stricture if one is produced. It is of primary importance to place two sutures at the anterior end to bring this end into contact with the posterior one so that there may be no traction on the sutures holding the two ends together. The urethra should be sutured around as large a sound as possible but the skin of the perineal wound should not be sutured. During cateterization neither lavage exploration nor dilatation should be performed.

Ten cases are reported, 9 of them the author examined three to six months after operation. There was no stricture following the operation in any case. The method should be used therefore in rupture and traumatic stricture of the urethra on account of the perfection of its results. The exceptions are a too extensive contusion of the urethra and rupture of the membranous urethra by fracture of the pelvis—the latter occurs in strictures more rarely than in ruptures of the penneal urethra. J T to

## GENITAL ORGANS

Mosto, R: Cysts of the Spermatocyst of Connective-Tissue Origin (Les kystes du connectif d'origine conjonctive) *Gaz. d. M.* 919, p 194.

xxxv 559 By Journal de Chirurgie

A youth of 20 had received a severe injury in the left inguinoscrotal region six years previous. He had been obliged to go to bed for a week, but there was no swelling either in the scrotum or inguinal region. A few months afterward a small swelling appeared at the root of the scrotum and continued to increase in size. When examined it was the size of a nut irreducible and received no impulse on coughing. It was elastic non fluctuating not

painful it was easily moved along the cord which was posterior to it. The orifice of the inguinal canal was enlarged and the tumor could easily be inserted into it. The diagnosis was cyst of the left spermatic cord. An operation was performed under novocaine anesthesia. The cyst which seemed to be covered by the cremaster without any intimate relation with the elements of the cord was easy to enucleate. Bassin's operation was followed by recovery. The cyst was smooth and the wall one half cm thick. The contents was clear lemon yellow alkaline in reaction very rich in albumin and contained some red cells and a very few white cells. The wall was made up of connective tissue more compact on the internal surface. Cells were numerous in this tissue—some round, some elongated—and there was a veritable infiltration of small diffuse cells especially abundant on the internal surface of the wall. There was no epithelial or endothelial covering.

Connective-tissue cysts of the spermatic cord are extremely rare. Slight and repeated traumatism and slight inflammation are the usual causes. Clinical diagnosis is very difficult. Histological examination shows the absence of endothelial or epithelial covering. CH VILLANDER

Squier J B: Indications for Operation on the Seminal Vesicle. *Ann. M. & S.* 1914, p 94.

By Surg. Gynec. & Obst.

The greater part of Squier's article consists of a discussion of the later views regarding chronic infections. He refers to the work of Adams and Rosenow and suggests that the gonococcus either becomes metamorphosed into forms resembling other bacteria, or attracts other organisms to areas of lowered resistance. The seminal vesicle with an anatomical arrangement which is favorable to drainage in only 4 per cent of all vesicles is well suited for such a process of subinfection. Squier believes that only in a small proportion of cases does the vesicle drain itself in the majority of cases the infection becomes encapsulated by scar tissue and offers to the blood stream a constant supply of toxins or of bacteria of low virulence.

Through the slow but persistent action of these products upon the synovia of the joints the heart valves and the kidney epithelium, there develops arthritis atrophic or hypertrophic forms, endocarditis and nephritis.

Squier denotes pyelitis and rheumatism as immediate indications for operation on the vesicles. In acute infections with the symptoms of what is usually called acute prostatitis developing during an attack of gonorrhea, cystitis, or pyelitis, and in cases of chronic suppurative of the vesicles, drainage is indicated. Perineal pain has been associated in three cases with vesicular calculi composed of phosphate and carbonate of lime and Squier believes this condition will be found not infrequently. In cases of rheumatism if the infection can be shown to be derived from the vesicles drain

age is indicated — it is necessary that other foci be excluded first. Squier's experience with rheumatic cases has been limited to the acute and subacute varieties and in every case (number not given) immediate cessation or amelioration of the joint symptoms has resulted. GEORGE G. SMITH

**Young, H. H.** *The Diagnosis and Treatment of Early Malignant Disease of the Prostate*  
*Am J Urol* 914 2, 51

By Surg. Gynec. & Obst.

From his complete list of prostatic carcinomata Young has selected twelve that might be considered early reciting the history and critically analyzing each case as to diagnosis and radical cure.

He divides them into three classes as follows:

1. Those in which the only pathological process present is cancer — six cases

2. Those in which cancer is associated with hypertrophy or benign adenoma — five cases

3. A case of chronic prostatitis with a small area of cancer in it

In the study of the symptomatology of these early cases and other late cases he concludes that there was nothing diagnostic or even suggestive there was complete absence of hematuria and hence it is erroneous to expect bleeding as an early symptom.

There was nothing in the appearance of these twelve patients to suggest malignant disease; they were not emaciated nor were they suffering pain with the exception of four cases and in these it was not severe.

In the first series there was roughness in three cases and nodulation in three which are suspicious symptoms. Characteristic also was a small enlargement accompanied by marked lateral intravesical enlargement. In the second series, delicate palpation and particularly palpation upon a cystoscope in the urethra will often show localized areas of induration or nodulation which is also a suspicious sign. In the third series there was also the characteristic small nodules as noted in the first series. There was no definite invasion of the seminal vesicles.

The diagnostic signs found were marked duration (at least hardness) either localized or diffuse in the past 50 years of age particularly when there was no history of a long standing prostatitis and even when the prostate was the seat of a chronic prostatitis in the third series. The absence of hematuria is not peculiarly a symptom present in while suggest it is also absent in early case though generally present and almost pathognomonic later on. The presence of benign hypertrophy of the lateral and median lobes should not lead to error if the elasticity of the soft and nodulous masses may often rob the posterior nodule or layer of carcinoma of tissue of sensation of induration to the finger in the rectum particularly on deep pressure. He says that it is always being continually suspicious of marked induration even if confined to a small nodule that early diagnosis can be expected and radical results obtained.

Young describes his method of radical cure for cancer of the prostate previously published and as a result of the experience gained in six cases reaches the following conclusions:

1. The operation should not be attempted where the infiltration extends more than a short distance beneath the trigone as determined by the cystoscopic examination with the finger in the rectum and the cystoscope in the urethra nor where the upper portion of both seminal vesicles are involved nor where an extensive intervessel mass indurated lymphatic glands involvement of the membranous urethra or muscle of the rectum shows that the disease has manifestly progressed too far. The urethral papilla should be left intact with sufficient tissue below them to insure proper suture and to leave their openings free from constriction 1 or 2 cm above the wound.

2. Hemorrhage should be carefully checked — by hugging the capsule injury of the periprostatic plexus may be largely avoided.

3. Silk should never be used and catgut only when occasional stitches of silkworm gut are employed to hold the tissue together in making the urethrovesical anastomosis.

4. When the operation is performed early it can be done without much danger or great difficulty and with excellent chance of cure.

The operation of conservative (partial) perineal prostatectomy in advanced cases of cancer of the prostate has produced wonderfully fine functional results which were in most cases maintained as long as the patients lived. Young discovered this fact incidentally as a result of operations performed on supposedly benign prostates which proved to be malignant. Up to April 1913 he had 52 cases with 2 deaths. During the last two years 16 cases have been operated upon with no deaths.

The author feels justified in carrying out the procedure of conservative perineal prostatectomy on almost all cases of cancer of the prostate which are too advanced for a radical operation and in which the frequency and difficulty of urination are considerable and the use of a catheter difficult or painful.

LOUIS GROSS

## MISCELLANEOUS

**Bertholet, E.** *The Effect of Chronic Alcoholism on the Organ of Man Especially on the Sexual Glands* (Die Wirkung des chronischen Alkoholismus auf die Organe des Menschen besonders der Genitalien). *Monatsschrift für Geburtshilfe und Gynäkologie* 1913.

Many clinical and experimental studies have shown that alcohol has a toxic effect on the organs of the body and on the sexual glands. The author tried to ascertain whether this injurious effect could be demonstrated microscopically. Therefore he made microscopic examinations of the testicles of 163 chronic drinkers and of 100 non-drinkers. He found that the chronic alcoholics

died sooner than the abstainers, and that all the organs of the former seemed to degenerate more frequently and to a greater degree than those of the latter. The testicles were the organs most frequently involved, 86 per cent of them showing signs of degeneration. This degeneration began very early and led very quickly to complete atrophy of the testicle and to azoospermia. Fatty degeneration was the first change to set in and it proceeded very rapidly. There was also sclerosis with cells interspersed through the connective tissue and progressive atrophy of the glandular parts of the seminal ducts. Unfortunately he could not get much material for examination of the female glands, but he obtained the ovaries from ten female alcoholics. He believes that the effect of alcohol on the female glands is as great and as rapid as on the male. He did not find a single normal ovary in the cases examined. BOSCHAM

Altmann: External Masculine Pseudohermaphroditism (Pseudo herm phroditism masculu us ex t rous) *Zentralbl f Gynäk* 914, 22 xl 12  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. a. d. Grenzgeb.

A 22 year-old individual who had grown up as a girl discovered after puberty that she did not belong to the female sex. She had the feelings of a man and her photograph shows a pronounced masculine appearance. The external genitalia showed the picture of hypoplastic masculine organs with hypospadias. In a left-sided inguinal hernia and in the right inguinal canal there were small round bodies. On operation for the hernia the contents were found to be a twisted testicle and seminal cord. Microscopically there was aplasia of the testicle with abundant interstitial cells. An interesting feature in the case was the appearance of a menstrual molimen every four weeks. Altmann believes this was caused either by periodic swelling of the testicles in the inguinal canal or by a disturbance in the internal secretion of the genital glands, which was then projected by sort of autosuggestion into symptoms in the masculinized genital organs.

FRAN COHN

Walker J W T Urinary Antiseptic. *Edinburgh Med J* 194 xii 503 By Surg. General & Obst.

The author confirms the now accepted view that urotropine is of value as an internal antiseptic only when converted into formaldehyde and that this conversion occurs as a simple chemical reaction in an acid medium and not by virtue of any particular cell activity on the part of the body. The only possible therapeutic application of the drug therefore is as a urinary antiseptic.

Walker makes some very practical and valuable observations for urotropine therapy. He says it is seldom difficult to render a acid urine alkaline, or moderately so. Potassium citrate and acetate and sodium bicarbonate are in common use and usually effective.

This alkaline treatment has been of wide use in

pyelitis or cystitis, because of a colon bacillus in which the urine has a pronounced acidity. In the pyelitis of childhood due to the colon bacillus, it is now the settled practice to apply the alkaline treatment. The urine quickly becomes alkaline and

when this has been accomplished the symptoms subside—the temperature falls to normal, the drowsiness and mental torpor vanish the pain ceases and the frequent micturition and scalding disappear. The improvement observed is attributed to the inhibition or death of the bacillus coli, by the action of the alkalies. But according to Walker the colon bacillus will grow in a urine made many times more alkaline than can be done in the body and there is no marked difference in the rate of growth whether the urine be acid or alkaline. This observation is significant and leads Walker to conclude "The action of alkalies in pyelitis appears to be a neutralization of the acid toxemia produced by the bacillus coli. The cures that are claimed, clinically are not cures in the bacteriological sense, for the infection remains only the symptoms which were due to the acids or acid endotoxins have disappeared. It is true that in some cases, when the urine is finally examined the bacteria have disappeared but in these cases, which are the exception, the destruction may be attributed to the natural resistance of the patient and not to the alkalies.

Walker suggests the following course of treatment of acute urinary infection due to the colon bacillus. First keep the urine alkaline by a course of alkalies until some days after the symptoms have disappeared and then omit the alkaline treatment and give a vigorous course of urinary antiseptics (urotropine) acidifying the urine if necessary by increasing doses of acid sodium phosphate or ammonium benzoate.

The treatment of urinary infections causing an alkaline urine is not so simple. Urotropine is not concentrated and is ineffectual. Therapy therefore, should be directed toward rendering these alkaline urines acid. There are two types of alkaline urine. One is a faintly alkaline urine which deposits phosphates sometimes in large amounts, but which apart from the change in reaction is normal in other respects. The other is a powerfully alkaline urine with ammoniacal decomposition, in which there is an abundant growth of bacteria (streptococcus, staphylococcus, etc.) together with other abnormal constituents, such as mucus, blood and pus. In order to make these urines acid Walker gives acid sodium phosphate beginning with 10 grains three times a day the reaction of the urine being watched and the dose increased every second day to 10, 40, 60, 90, 120 and if necessary to 150 grains before each meal. The decrease is limited by the effect on the bowels as the large doses may cause diarrhoea. In the same way ammonium benzoate may be given in increasing doses 10, 50, 100, and 30 grains. It is useless to give urotropine before the urine is acid and, until this occurs, Walker advises giving boric acid (0.15 grains three times a day) which be

believe has no influence in acidifying the urine but has a distinct antiseptic influence. As soon as the urine is acid urotropine is substituted. Urotropine should never be given with the acid-producing drugs the former is better given after meals when the acidity of the stomach is reduced and the latter some time before the meal.

A popular method in the treatment of cystitis and urinary infections has long been by diuretics and forced water. This cannot be wisely used in

conjunction with urotropine therapy as it lowers the acidity of the urine so that splitting of the urotropine does not take place. A choice of the two methods powerful diuresis and urotropine therapy must therefore be made.

The author emphasizes the importance of the systematic use of urinary antiseptics as prophylactic agents against urinary infection in all forms of instrumentation of the urethra and bladder and genito-urinary or pelvic operations. FRANK HINDMAN

## SURGERY OF THE EYE AND EAR

### EYE

Perlmann A. Etiological Relationship between Accident and Detachment of the Retina. (Über den ursächlichen Zusammenhang von Netzhautablösung und Urt. II.) *Ztschr. f. Aug. u. B. I.* 9 4 xxx 4

By Zentralbl. f. d. ges. Chir. Grenzgeb.

The author discusses the relationship between accident and detachment of the retina. He describes the disease in such a way as to make it easily understood by the laity so far as it is scientifically explained. He attributes detachment of the retina to various causes general and local and shows that there is a predisposition to this trouble.

He distinguishes a primary and a secondary form that is a direct one and an indirect one from trauma or other disease. In regard to the latter he points out the marked difference between cases that result from direct injury of the eye by sharp instruments in which the connection with the accident is not to be doubted and those that follow other accidents such as concussion. In the latter class of cases there is generally no connection between the accident and the affection of the retina as such an accident would never cause detachment of the retina in a normal eye.

He discusses the question of secondary detachment of the retina in tumors and in most cases believes there is no connection with an accident. As to primary detachment of the retina he points out that it always occurs as the result of their pathological conditions of the internal eye especially nutritive disturbances of the vitreous body. He comes to the conclusion that accident is never really the cause of primary detachment of the retina but at most furnishes the occasion for it.

The question of whether accident of any kind can cause detachment of the retina in an eye predisposed to it is discussed. He thinks it is relatively easy to answer the question in the affirmative in accidents characterized by suddenness and violence but believes that there must be a critical consideration of the accident in each case and the relation in time between it and the detachment. If there is no real

accident but only an exaggeration of the patient's usual effort in work he does not believe there can be any causal relation. He bases his opinion on important principles and on expressions of similar opinion by Leber and Schmidt Rimpler. The decisions of insurance companies in such cases are cited. Most of the decisions of course are in primary detachment. The lack of clearness and uniformity in the opinions of physicians regarding the question is shown by the decisions of the insurance companies. Decisions are quoted which contradict each other. The uncertainty is especially shown in cases where there is no real accident but merely overexertion in work. He disagrees with some of the decisions decidedly. QUINER

Doumenge R. Otitis Media and Ot. c. Septicæmia from Pyocyanus. (Otitis moyennes et septicæmies otiques à pyocyanique). *Thèses d. doct. Par. 1904*. By Journal de Chirurgie.

In otology the bacillus pyocyanus has generally been considered the cause of spontaneous or post-operative perichondritis and of external croupous otitis. Sometimes however it causes more serious complications as in the case described below.

A young man of 19 had had a discharge from the right ear from infancy. This otorrhea became worse and there was a thrombophlebitis of the lateral sinus. In the course of the mastoid operation the operator was struck by the appearance of the bone on which the sinus rested. After a temporary improvement second operation had to be performed on the third day. The greater part of the petrous portion of the temporal was resected; an incision of the lower part of the sinus did not cause any flow of blood and the jugular was ligated. From that time the patient improved progressively, and left the hospital at the end of three and one-half months. His convalescence was interrupted twice by pulmonary attacks and the sputum collected at this time had the characteristic appearance and odor of pyocyanus. Bacteriologic culture proved that it was a case of pyocyanus septicæmia. Cultivation in

boillon of blood obtained at the bend of the elbow yielded colonies of typical bacillus pyocyaneus

FRANCIS MUNCH.

Harry P. A. Traumatic Exfoliative Keratitis.  
*Lancet* Lond 19 4 cxxxvi 16 9.

By Surg. Gynec & Obst.

Harry has six cases of traumatic exfoliative keratitis followed by traumatism of a trivial nature. The symptoms are definite and clearly stated upon awaking and opening the eye a sharp stabbing pain of neuralgic character is experienced the eyeball is red, vision slightly lowered and accompanied with lachrimation and photophobia. With or without treatment the eye returns to normal in a few days. Relapses take place with more or less regularity every four to six weeks with a slightly superficial milky spot at the site of the original injury and in the immediate vicinity the epithelium is loosely attached to Bowman's membrane. The most likely explanation for this comparatively rare condition is the presence of some toxin manufactured beneath the epithelium thereby producing small exfoliations. If curetting and cauterizing fail the author recommends several oblique needle corneal punctures at and around the seat of trauma, to allow the aqueous antibody to escape slowly between Bowman's membrane and the epithelium. Thus, together with the use of weak peroxide and 2 per cent chlorotone is sufficient to prevent recurrence. FRANCIS LANE.

Gibson C. Bilateral pharyngoplasty by a Pregrafted Flap.  
*A Surg Phila* 19 4 lx 958.

By Surg. Gynec & Obst.

By figures the author shows the outlines of his steps for grafting. The operation is divided into two stages as follows:

In the first stage the horizontal incision from the outer canthus of the eye is made a little longer than the part to be grafted. A pouch is made pocket-like in effect so that it will contain the cut graft and the edge of the graft overlapping the pouch. A protective dressing is then applied.

In the second stage the growth from the lower eyelid is removed by a quadrangular incision impinging on the lun from which the pregrafted flap is made. This horizontal incision, which is parallel to the first origin incision, frees the flap allowing it to be slid over into the gap.

The author compares the advantages of the operation for the removal of malignant growths from the borders of those resulting from treatment with the X-ray caustics, or radium. He cites two cases with no recurrences—the first ten years, and the second for seven years. L. J. GOLDBACH.

Baird, R. Cataract in the Capsule with Notes on Eleven Hundred Thirty-Seven Consecutive Operations. *Indian M Gaz* 9 4 xlx 5.

By Surg. Gynec. & Obst.

Baird sums up the advantages as well as the dangers and difficulties of the Smith operation. His

record of cases gives a clear idea of the satisfactory results obtained in this series. E. B. FOWLER.

Newman E. A. R. Irrigation after Cataract.  
*Indian M Gaz* 19 4 xlx, 518.

By Surg. Gynec. & Obst.

Newman describes the method of irrigation of the anterior chamber. He uses a closed end irrigator with a slit in the side, the nozzle being placed just inside the outer angle of the wound while the normal saline solution is run through it. Of 93 cases only 3 required needling. E. B. FOWLER.

Holland H. T. A Thousand Cataracts Performed in Six Weeks at Shikarpur. *Indian M Gaz* 9 4 xlx, 3.

By Surg. Gynec. & Obst.

Of the 1,024 extractions on which these observations are based 800 were performed according to Smith's method. The author resorts to capsulotomy in cases in which the lens will not present except with greater pressure than he deems safe and in cases of high tension believing choroidal hemorrhage less apt to occur. He compares the methods and states that he considers the trephine the operation of choice. E. B. FOWLER.

O'Connor R. P. Further Experience with the Writer's Method of Shortening Ocular Muscles without Employing Sutures under Tension.  
*Arch Ophth* 9 4, 104, 368.

By Surg. Gynec. & Obst.

In the shortening of ocular muscles without employing sutures under tension O'Connor has devised a method of advancement calculated to obviate the customary overcorrection necessary to offset the subsequent slipping which invariably occurs the first few days after the customary operation. He declares the great defect of most operations is that the sutures are so placed that they are necessarily under the elastic pull of the muscle thus violating an important principle of surgery with regard to suturing. The principal step consists in separating strips of the tendon 7 or 8 mm broad (11 le gth at both margins) but which catgut strands are so placed that when made taut the strips are folded into a double loop and thereby shortened. These shortened strips bear the brunt of any muscular traction and serve to splint the sutures which hold in place the broad central section of the tendon which has been brought forward after the manner of other methods, while firm union is taking place. Five cases operated on after this fashion resulted in all that was expected or even desired. FRANCIS LANE.

#### EAR

Lothrop, H. A. Frontal Sinus Suppuration.  
*Ann Surg Phil* 9 4, lx, 937.

By Surg. Gynec. & Obst.

To obtain satisfactory drainage of the frontal sinus it is necessary to bear in mind that the ostium



is surrounded by thin bone and while the area posterior and internal is small and too dangerous for interference the area anterior and external is comparatively thick and dense and may be removed with comparative safety. The variable relations may be determined by X-ray examination in two planes.

The technique of operation is as follows. An incision is made from the center of the unshaven eyebrow inward and downward the sinus is entered just above the base of the nasal process and a probe bent so it will stay in place is passed through the ostium and out through the anterior nares. The ostium is enlarged by passing small curettes from above down in front and external to the probe at the ostium. With the probe as a guide burr drills are introduced through the nares and the opening enlarged with precision and safety. A large portion of the interfrontal septum is removed although the other sinus be healthy as the proximity of healthy mucous membrane favors early epidermization. The external wound is then washed with a sterile solution and the skin incision is closed.

ELLEN J PATTERSON

Wood J W. The Use of the Nasopharyngoscope in Otorhinology. *P 11* *et seq* 94. *Ann* 760.

B Surg Gynec & Obst

Besides the value of the nasopharyngeal scope in examining the nasopharynx and eustachian tubes as well as the posterior choanae and the structures contained therein the author dwells on some of the more accurate methods of therapy made under direct inspection because of the aid derived from this instrument.

For instance in tubal therapy with the nasopharyngoscope passed through the opposite nostril the tubal instruments are kept within the operator's gaze and directed where they should go.

Again in referring to the relief of hemicranias and facial neuralgias of nasal origin by alcohol injections of the sphenopalatine ganglion as discovered by Sluder the author speaks of the injection without the aid of the nasopharyngoscope as a shot in the dark but with the aid of this instrument the region is easily inspected and the injections made more accurately.

The value of the nasopharyngoscope in exploring the sphenoidal sinuses and maxillary sinuses is also mentioned.

OTTO W. ROTZ

Welty C F. Indication for the Labyrinth Operation with Report of Eight Operations and Six Cases in which no Operation was Performed. *Ann Otol Rhinol & Laryngol* 94. *Ann* 66.

B Surg Gynec & Obst.

The author reports several cases operated upon for chronic suppurative otitis media which later developed labyrinthine affections or cerebellar symptoms some of which were operated upon and some of which recovered without operation.

However the author thinks that in cases of sup-

purative otitis media infection by way of the labyrinth is a frequent cause of infection of the meninges and he considers the labyrinth operation indicated in those cases which have only remnants of hearing on the one side and no caloric reaction or *vice versa*. It is his opinion that in the near future it will be considered conservative surgery in these cases to open and explore.

ELLEN J PATTERSON

Sharp J C. When the Radical Mastoid is Imperative. *Ann Otol Rhinol & Laryngol* 194. *Ann* 74.

By Surg Gynec & Obst

The indications for radical mastoid operation are cholesteatoma, caries or necrosis of the petrosa during the course of a chronic middle ear suppuration, intracranial complications or labyrinthine symptoms occurring during chronic suppurative otitis media or an acute exacerbation of a chronic tympanic suppuration with mastoid involvement.

ELLEN J PATTERSON

Dighton A. The Blood Clot Method as Applied to the Mastoid Operation. *P 121* *et seq* 104. *Ann* 755.

By Surg Gynec & Obst

In this the first article on this topic appearing in any British journal the blood-clot method as applied to mastoid surgery is enthusiastically endorsed. The author explains the beneficial action of the blood-clot method as depending upon known physiological phenomena, the presence in the blood of two substances:

1. The amoebocyte or immune body which is produced in the blood by the presence in the body of a particular bacteria.

2. The complement or alexin, which occurs naturally in the blood-serum but by itself has no action upon the bacteria. When however the amoebocyte acts upon the bacteria these become vulnerable to the complement which dissolves them.

The author applies this process as occurring in the mastoid cavity in the following words: "After the operation the majority of the bacteria are killed by the antiseptic used. Then the cavity is filled with blood clot. The blood contains amoebocytes to the bacteria present and is brought to the part in comparatively large quantities. The blood-clots and the serum containing the complement separate therefore we get amoebocytes catching the bacteria, and when caught the complement ready to dissolve both."

The author makes no attempt to preserve pericardium or to make a pericardial flap. After the operation is performed the cavity is dried with swabs painted with pure carbolic acid, and immediately dried out again. The skin edges are rubbed with gauze to promote bleeding and the wound closed with silk-worm gut sutures—usually three. The external auditory canal is packed with a plug of wool and the entire area is swabbed with ether covered with gauze wrung out in acetone colloidion and allowed to dry. The dressing is removed on the fourth or fifth day.

The advantages of the blood-clot method are  
 1 Less disfigurement as the clot forms an excellent scaffolding for the formation of new bone.  
 2 No painful after-treatment  
 3 Healing is markedly hastened  
 The method is not applicable to cases in which the sinus, the dura and the facial nerve is exposed  
 ORTO M RORT

Dench E. B.: The Treatment of Accidental Wounds of the Dura during Operation upon the Mastoid Process. *Laryngol* 9 4 221 394  
 By Surg Gynec & Obst

Wounds of the dura in the middle cranial fossa whether accidental or due to necrosis are not necessarily followed by severe sequelae provided the operator is careful to preserve perfect asepsis during the entire operation

The author's technique is to expose a large area of dura and, after every trace of disease has been cleared from the tympanic cavity the dural opening is enlarged by two crossed incisions. This opening is firmly packed with iodoform gauze to cause sufficient pressure to secure an amalgamation of the cerebral membranes about the wounded area and thus avoid meningeal infection

ELLEN J PATTERSON

Hall, G. C. Surgical Judgment in Operations for Acute Mastoiditis. *Ky M J* 914 22, 368  
 By Surg Gynec & Obst

There are no symptoms which point unmistakably to mastoiditis, but any combination of three or four of the cardinal symptoms if continued for twenty-four or thirty-six hours should convince one of such a condition although there are undoubted cases of mastoiditis with practically all of the classic symptoms absent

All cases of middle ear inflammation should be watched from inception for the advent of signs of

mastoid involvement in which case operation should be done at the earliest possible moment

The author emphasizes two points in his technique (1) the importance of wide opening of the drum membrane and (2) the excavation forward from the antrum of the zygomatic cells and in the direction of the aditus and antrum

In the discussion which followed the general consensus of opinion was that early operation with thorough evacuation of all the diseased structures made for the safety of the patient

ELLEN J PATTERSON

Braun A. and Friesner I.: The Diagnosis of Endocranial Complications of Suppurative Labyrinthitis. *Int Rhinol & Laryngol* 19 4 221 9  
 By Surg Gynec & Obst

Intracranial complications are relatively more common with acute labyrinthitis, because there is no time for the inflammatory process in the labyrinth to be walled off but on account of the overwhelming predominance of chronic otitis suppurative labyrinthitis, intracranial complications are more frequently observed in association with the chronic form

Where the labyrinthine functions have been impaired but not entirely destroyed it is difficult to differentiate between labyrinthine disease alone and labyrinthine disease complicated by disease in the posterior fossa, and other symptoms for diagnosis must be depended upon. Where the labyrinthine functions have been totally destroyed, the existing symptoms can be easily ascribed to the complicating intracranial lesion.

Intracranial complications of suppurative labyrinthitis usually occur in the posterior fossa rarely in the middle fossa. The symptoms common to all forms of inflammatory processes in the posterior fossa are headache, vomiting and vertigo

ELLEN J PATTERSON

# SURGERY OF THE NOSE, THROAT, AND MOUTH

## NOSE

Thomson St C. Some of the Symptoms and Complications of Sinusitis. *P. 41 to 47* 1904. xxi 745 By Surg. Gynec. & Obst.

The author groups the symptoms of sinusitis under four chief heads as follows

- 1 Symptoms in neighboring region
- 2 Symptoms in more distant organ
- 3 Symptoms of interference with the general health

4 Intracranial complications  
Under the first group symptoms in neighboring regions the following arrangement is observed

a Nasal symptoms such as obstruction and discharge

b Symptoms in nasopharynx and pharynx — postnasal catarrh and pharyngitis

c Ocular symptoms — orbital cellulitis, periorbitis of orbit, retro-ocular phlegmon, blepharitis, phlyctenular keratitis, diminution of field of vision, asthenopia, scotomata, photophobia, dilatation of the pupil, blepharospasm, ptosis, strabismus, cataract, hemorrhagic retinitis, glaucoma, and optic neuritis

d Aural symptoms — tinnitus, vertigo, earache, otitis media, catarrh, and purulent otitis media

g Cutaneous affections of the face — eczema, of the nose and periorbit, erythema, urticaria, furunculosis, and attacks of facial erysipelas

Under the second group symptoms in the more distant organs are

a Laryngeal and respiratory tract — purulent or scabby laryngitis and bronchorrhoea

b Digestive tract — gastric disturbances, obstinate constipation, diarrhoea, bad taste

c Vascular system — anaemia, phlebitis, bradycardia

Under the third group symptoms of interference with the general health are mentioned

Loss of weight, feverish attacks, simulating typhoid, malarial pyremic metastases, insomnia

b Reflex ophthalmic catarrh and such cerebral conditions as irritability, loss of memory, languor, weariness, tinnitus, prosernia, neurasthenia, melancholia, delirium, assistance to the action of alcohol and tobacco

Under the fourth group intracranial complications are

a Meningitis — usually from pus in the ethmoid bone

b Cerebral abscess — usually from frontal sinus suppuration

c Thrombosis of cavernous sinus and basal meningitis — usually from sphenoidal trouble

Otto M. Rott

Lynch R. C. Vacuum Disease of the Maxillary Sinus. *A. & Otol. Rhinol. & Laryngol.* 9 4 xxii 59 By Surg. Gynec. & Obst.

The author reports the history of six cases of vacuum disease of the maxillary sinus in which the symptoms were promptly relieved by puncture of the naso-antral wall

Cases exhibiting symptoms of constant unilateral pain in the eye in the region of the naso-antral wall or pain localized in all of the teeth and unrelieved by nasal applications, nasal reflex neuroses, change in the quality of the voice, inability to probe the cavity together with negative nasal findings, negative transillumination and negative X-ray should lead to the suspicion of a negative pressure condition

ELLEN J. PARKER

Cohen L. Corrective Rhinoplasty. *Laryngoscope* 9 14 xxv 565 By Surg. Gynec. & Obst.

The author thinks the satisfactory cosmetic effects in these operations depend upon the free mobilization of the entire bony and cartilaginous framework, the proper placing of the nose on the middle line of the face and its retention there with some suitable apparatus

He operates under strictly aseptic conditions using either or local anesthesia and after making an incision within the vestibule of the nose works subcutaneously to remove any redundant bone and cartilage or to mobilize the bony or cartilaginous framework after which a copper saddle is adapted and adjusted to hold the parts in proper position. The vestibule is packed loosely with iodoform gauze

ELLEN J. PARKER

## THROAT

Carmody T. E. Histopathology of the Faucial Tonsil. *Laryngoscope* 9 4, xxi 576.

By Surg. Gynec. & Obst.

The lymphoid structures of the upper respiratory tract all have their periods of activity which are not coincident but successive or slightly overlapping and while the pharyngeal is retrogressive and probably the faucial also, the lingual and laryngeal are reaching the height of activity and beginning development respectively

The faucial tonsil resembles the lymph gland more closely than any of the other lymphoid tissues in shape and structure, having a capsule although not complete fibrous trabeculae, adenoid cells and

a rich supply of lymph vessels which drain into the superior deep cervical chain of glands

A study of the tonsils removed showed destruction of epithelium on the surface and in the crypts the older the patient the less adenoid tissue and the more connective tissue and the greater the number of attacks of tonsillitis or abscesses the greater the amount of connective tissue. *ELLEN J. PATTERSON*

**Thomson St. C. Intrinsic Cancer of the Larynx**  
Complete Excision Apparently Effected by  
Endolaryngeal Operation. *Tr Am Lary Soc.*  
*Atl. Atlantic City 9 4, 1917*

By Surg. Gynec. & Obst.

The conclusions of the writer are

1. Cancer of the vocal cords in the early stages is strictly limited and very slowly progressive

2. Diagnosis is based chiefly on inspection of the larynx. Where the growth is superficial and not infiltrating it can be confirmed by microscopic examination

3. The growth may be completely removed endolaryngeally even when it occupies the entire length of a vocal cord.

4. Laryngofissure is the operation of choice in all cases of endolaryngeal cancer. It is not a dangerous operation and offers the best prospects because the disease remains superficial and limited for a time and finally there is a lasting cure in 80 per cent of the cases. The value of indirect laryngoscopy is strongly insisted upon as being far gentler than the direct method.

*RICHARDSON* of Washington spoke of one case which he had five or six years ago in which there had been no recurrence while most of his other cases suffered recurrences. Only one had a recurrence *in situ*.

*SOLIS-COHEN* of Philadelphia, has done a number of these operations and has never seen a recurrence. His method is to make an incision through the perichondrium all around the growth and then with blunt elevator the parts are lifted up. With a curved serrated scissors the whole mass is taken up perichondrium, mucous membrane and the growth but the growth itself is not touched at all with any instrument.

*MAYER* of New York spoke of the method of producing anesthesia by injecting ether into the intestine.  
*Otto M. Roth*

# BIBLIOGRAPHY OF CURRENT LITERATURE

## GENERAL SURGERY

### SURGICAL TECHNIQUE

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Course of term pregnancy to the end of three months  
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n. v. r. i. b. t. o. p. e. r. a. t. i. o. n. J. R. t. B. l. Soc. d. b. t. d. g. de. Pa. 9 4 II 9 [410]

I. tra. t. rine pr. na. cv. fter. tra. t. rine pr. na. and one  
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# INTERNATIONAL ABSTRACT OF SURGERY

DECEMBER 1914

## COLLECTIVE REVIEW

### THE X RAY INVESTIGATION OF THE COLON

#### A REVIEW OF SOME RECENT LITERATURE

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FOR more than a decade the rontgen examination of the oesophagus and stomach has been extensively carried out in all the large clinics of Europe and during the last half of this period in the large American clinics Pfahler was probably the first in this country to undertake extensive bismuth studies. The investigation of the colon by means of the X ray is somewhat more recent however and only within the last two or three years has it been carried out with anything like the precision now attending the rontgen examination of the stomach.

The earlier studies of both the stomach and bowel were begun at a time when the question of ptosis of the abdominal viscera was receiving special attention. Hence the earlier gastro-intestinal X ray studies were carried on with special reference to form and position a circumstance which undoubtedly led the medical profession to attach undue importance to the form and position of the colon.

With increasing experience the morphological factors have shrunk in importance while the problems relating to the functional behavior of the alimentary tract have assumed greater significance. Of all the various facts which can be learned about the stomach or bowel by rontgen examination the question of ptosis, at least in the opinion of the writer is the last one thought of and the one given the least consideration. In other words ptosis is looked upon as a *symptom* rather than a causative factor although it is con-

ceded that in certain cases the ptosis, although at first a symptom may later become part of a vicious circle and thus assume importance as a causative factor. The technique of the X ray examination of the colon has been so far perfected that, with an accuracy that is almost uncanny it is now possible to locate the adhesions and membranous attachments, most of which bear the name of some special surgical investigator and yet even here the X ray examination serves a much more valuable purpose in ascertaining the degree of interference with bowel function than in merely locating the position of adhesive bands. As Skinner (1) has stated the stomach and colon are not chemical retorts, but functioning motile organs, and the position of the gastro-intestinal tube does not so much concern us, as its functions do.

*Physiology of the colon* (2) The introduction of the rontgen method especially the work of Cannon which was carried out largely on animals, has thrown much light on the peristalsis of the colon. The writer's observations in man have almost to the minutest detail confirmed the work of Cannon on animals, especially in regard to antiperistalsis. Cannon showed that the prevailing movement in the proximal colon was antiperistalsis, consisting of a movement of waves backward toward the cæcum. These antiperistaltic waves do not run continuously for a long time but periodically although a series of waves at the rate of perhaps five a minute can be seen con-

tinuing for four or five minutes. The distal colon has as its characteristic activity an onward movement several times having been described. Haustral churning is occurring constantly in the distal colon serving to keep the material in this region thoroughly mixed with the digestive fluids. This haustral churning, or segmentation is analogous to the segmentation which occurs in the small intestine. Other movements of the bowel are the large pendulum movements of Rieder (3) consisting of a considerable dislocation turning and winding of those portions of the colon which have a long mesocolon all of which occurs without any actual transportation of the contents of the bowel. These snake-like dislocatory movements occur in everybody in various degrees and with varying frequency.

It is probable that the principal propulsive movement in the colon serving to move the bowel content from the proximal colon into an S through the distal colon is the mass movement first described by Holzkoehn (4). This is a most striking phenomenon and when once seen can never be forgotten. The bowel contents suddenly lose their haustral markings and are formed into an ovoid sausage-shaped mass with perfectly smooth edges, and rounded at the ends. This mass travels at about twice the rate of peristaltic waves in the stomach the distance traveled varying with the circumference. As the mass comes to rest, the haustral indentations reappear quickly if the bowel content be semifluid more slowly if the bowel content is of firmer consistency. It is estimated that these mass movements occur about 12 times daily. Further studies on this mass movement have been reported by Barclay Hertz, and Jordan and by the writer. Before the introduction of the horizontal fluoroscope these large colon movements were rarely observed. Holzkoehn (4) in 1900, reported two cases. Lechl and Lorges (5) in 1911 two cases. Barclay (6) in 1912 two cases. Schwarz (2) in 1913 two cases, and the writer (7) in 1913 reported thirty-seven cases in which this mass movement had been observed. In recent times, however, especially since the horizontal fluoroscope has come to be more extensively employed this type of onward peristalsis has come to be recognized as being very common. Hertz and Barclay have both informed the writer that they now see this form of peristalsis frequently.

The filling of the stomach and the movements of the colon by respiration are important factors in the shifting of the contents of the colon. The writer's statement (7) that the content of the

colon can be shifted very little, if any, by palpation is confirmed by the observations of Schwarz (2) who declares that even with strong pressure it is not possible to lift the content of the ascending colon into the transverse. The same holds true of the distal portion of the colon. In a few cases only was Groedel (8) able to affect a movement of the contents of the colon for short distances with a vibrator in full action. The well recognized favorable influence of massage and mechanical vibration must therefore be produced indirectly by increasing the tone of the bowel muscle rather than by any actual mechanical pressure of the bowel contents onward.

Various authorities have constructed tables showing the rate of passage of the barium meal through the alimentary tract. Summarizing these observations, we may conclude that following a meal in which barium sulphate constitutes the opaque substance the stomach should be empty within four and one-half hours; the head of the barium column having reached the cecum at that time. The entire barium meal should have passed into the colon by the eighth hour or at most the tenth hour at which observation the head of the barium column should have reached the middle of the transverse colon. The head of the barium column should reach the descending colon from nine to sixteen hours following the ingestion of the meal and the colon should be practically empty of barium at the thirty-sixth hour. No purgatives should be given on the day immediately preceding the examination. The barium meal should be substituted for one of the ordinary meals so that the rhythm of meals will not be disturbed.

**Technique.** The contrast material may be introduced into the colon either in connection with a meal or by enema. The writer recommends study of the colon following the meal as being more likely to give accurate information concerning the function of the bowel, reserving the injection of the barium enema for those cases in which there is a question of gross obstruction (carcinoma, tumor, adhesion bands, etc.) and for testing the function of the ileocecal valve. Following the barium meal the studies of the colon may be carried out at the ninth, twenty-sixth, thirty-second and fifty-fifth hours.

Others prefer the barium enema after the method of Haensch (9). The Haensch enema consists of water one liter, bolus alba 300 grams, bismuth carbonate 75 grams, and water sufficient to make one liter.

The writer's formula (10) is as follows: To 255 dr of gum tragacanth add about 1 oz of alcohol.

Shake well. Add 20 oz. of warm water and shake. Add 3 oz. of barium sulphate then 20 oz. of water shaking well each time. This mixture should be made up fresh shortly before using.

Holzknicht and Singer (11) give the following formula: (a) Barium sulphate clyisma. To one liter of boiling water a suspension of two soup-spoonfuls of finest potato starch in three-fourths of a liter of cold water is added and after being boiled again 160 grams of barium sulphate and one-quarter liter of hot water is stirred with it. The mixture is then boiled for five minutes and cooled off to 112° F. This mixture can be preserved in the icebox several days. (b) The bismuth clyisma. To one liter of boiling water a suspension of two tablespoonfuls of finest potato starch in a quarter of a liter of cold water is added. This is boiled again for five minutes and 120 grams of bismuth carbonate stirred in three-fourths of a liter of cold water is added to it without boiling again.

Jaugas and Friedel (12) recommend a paste especially for the investigation of the rectum and sigmoid. The paste consists of a mixture of vaseline and oil in equal parts to which barium sulphate or bismuth carbonate is carefully incorporated in equal parts. This preparation can be injected with a syringe. The quantity of the injection varies with the importance of the segment to be explored. A liter usually suffices to reach the splenic flexure.

The technique prescribed by Haensch for the injection of the colon under fluoroscopic control has not been materially improved by any of the more recent writers. Before the injection it is important that the bowel shall have been cleared out very thoroughly by means of appropriate laxatives or by thorough enemas or both. The patient lying supine upon the trochroscope the barium suspension is placed in a container two or three feet above the patient, and is allowed to flow by means of gravity through an ordinary enema tube and rectal point into the bowel. A colon tube is quite unnecessary a rectal point passed two or three inches into the bowel being sufficient. The temperature of the clyisma should be 100° F. The progress of the clyisma should be watched inch by inch as it ascends the colon. A pause in its progress may be caused by a kink in the rubber tubing or a clogging in the tube. At opportune moments during the inflow of the clyisma manipulation under the screen may elucidate special points. Haensch advises, after the examination that the container from which the injection has been made be lowered and the enema allowed to return by gravity. The emptying of

the colon is also watched under the fluorescent screen and additional information may thus be obtained as to the exact site of an obstruction.

In discussing the advantage of this direct roentgenoscopic observation of the opaque clyisma over the observation after an opaque meal, or the observation of the enema after it has been injected Haensch (13) insists that it is just the observation of the filling of the colon in all its stages which permits one to recognize abnormal conditions of intestinal caliber with the greatest accuracy.

Stereoroentgenography of the alimentary tract has been extensively utilized by many workers. This method has especial value in the study of the colon particularly the pelvic colon.

*Colonic adhesions.* Pers (14) of Copenhagen claims to be the first to describe a technique for the detection of colonic adhesions. It is certain however that many others have already used the method which he describes. It was employed by Pfahler at least two years before Pers' publication. Pers called attention to the fact that the most common causes of adhesions of the colon are (1) ulcerous disease of the colon (2) inflammatory disease of the colon or other organs of the abdomen (3) trauma of the peritoneum from operations (4) the adhesions due to modern fixation operations. Although in some cases the adhesions cause no symptoms they often announce themselves by pain and obstruction. Patients with colonic adhesions are much to be pitied because the adhesions are often not recognized. While the history may point out the probable diagnosis, there is much uncertainty and we now know especially through the work of Eastman Hertzler Jackson and others that extensive bowel adhesions may occur as the result of chronic intestinal stasis, without any history of a definite inflammatory process.

With roentgenography and especially roentgenoscopy we are now able to determine whether the bowel is adherent to its surroundings the site of the possible adhesions, and if operation for relief of adhesions is done to ascertain how far the operation is able to restore the motility of the intestine. The most common site of pericolic adhesions is as will be reiterated later in the iliac and pelvic colon especially about the ilio-pelvic junction.

It is important to emphasize here the necessity for proper protection during screen examination. Both Pfahler (15) and the writer (16) have published warnings against the careless use of the X-ray in fluoroscopic work. The tube holders must be very carefully protected with lead or an

equivalent thickness of other X-ray protective material. The time of exposure of the patient during fluoroscopic examinations is likely to be unusually prolonged beyond the danger limit hence the greatest care should be exercised to avoid over raying of the patient. As Skinner has recently remarked few roentgenologists know how to use the foot-switch, intimating that continuous illumination of the screen is usually unnecessary although often practiced.

One of the most important advantages of the fluoroscopic method in the study of the colon is the possibility of guided palpation under the fluorescent screen. This may be accomplished by the protected hand or preferably with some palpatorium not opaque to the X-ray. Among the chief purposes of this palpation under the fluorescent screen are the determination of mobility, the relation of various shadows, and the identification of points of pain on pressure in relation to the bismuth shadows. Whether or not loops of bowel can be easily separated, the mobility of the cecum, the appendix, the transverse colon, the pylorus, and the descending colon are all points which may be studied by the aid of the palpatorium almost as well as by manual palpation. Only those who have experienced the satisfaction of palpating the bismuth filled stomach and bowel under the fluoroscopic screen can fully appreciate visualized abdominal palpation under fluoroscopic guidance, but unless the greatest caution is observed to insure adequate protection in roentgenoscopic work, great suffering and even loss of life may result from the waste of enthusiasm for fluoroscopic work which is now sweeping over this country.

**Constipation.** The roentgen study of constipation and its causes has led to a number of classifications. The classification of constipation by Schwarz (3) considers the hypokinetic and dykinetic forms. In the former there is a lack of muscular tone and motor stimuli; in the latter there is excessive motility and antiperistalsis to a marked degree. The writer finds that it is in these cases that ileocecal valve incompetency occurs most frequently, the spastic constipation and increased antiperistalsis resulting in over distention of the cecum which is directly the cause of the ileocolic valve incompetency. The marked spasticity of the bowel in these cases causes the intestinal content to be seen as small isolated masses. Hertz has added the term dyschezia for those cases where the colon is found to be normally active, the food passing through it and reaching the rectum in the normal time, the delay being due to an abnormally distended

ampulla with blunting of the defecatory reflex. There may also be cases of congenital dyschezia dependent upon some defect in the muscle sense of the rectum.

It seems to the writer that some of the cases of so-called dyschezia are really due to adhesions of the pelvic colon, especially adhesions involving the pelvicorectal junction. These adhesions prevent the normal uprising of the pelvic colon during defecation. In the writer's opinion the cause of constipation is to be found, in the majority of cases, in the colon below the crest of the left ilium; that is in the pelvic colon and rectum, the marked spasticity of this portion of the bowel being found almost invariably associated with adhesions.

**Abdominal tumors.** The roentgen diagnosis of intra-abdominal tumors by recognition of the resulting dislocation of the colon was first described by Stierlin (17). Since then a number of others have utilized this method of diagnosis. The abdominal organs are not well adapted for direct roentgen reproduction. The same is true of intra-abdominal neoplasms, tumors, and abscesses. Aside from the liver, the spleen and the larger subhepatic and subphrenic abscesses, the abdominal viscera are not easily visualized. The intestines may be filled with ray absorbing substances or with gas. Certain hollow organs, as the bladder and kidneys, have been filled with collargol.

Certain groups of intra-abdominal neoplasms may be studied however by their dislocation of the colon. This method is useful only for those tumors which are in the immediate neighborhood of the colon, particularly tumors of the kidney, pancreas, psoas abscesses, and retroperitoneal sarcomata. Tumors of the kidney tend to dislocate the colon toward the midline. Tumors of the spleen usually occur in front of the colon without displacing it. Tumors of the pancreas and retroperitoneal sarcomata usually dislocate the transverse colon downward. Psoas and iliac abscesses are shown by typical median dislocation of the cecum and ascending colon. In large uterine tumors, the pelvic colon is compressed while the cecum and ascending and particularly the transverse colon are lifted upward. In ovarian cysts the dislocation of the pelvic colon is not characteristic. Morse (18) records an instance of a sarcoma of the left kidney which could be located by the appearance of a mass between the spinal column and the colon filled with bismuth.

**Ileocecal tuberculosis.** In 1911 Stierlin (19) reported that he had found in the roentgen exami-

nation a new diagnostic method for the recognition of even the early stages of ileocaecal tuberculo is. Schwarz (2) has recently voiced his unqualified approval of Stierlin's sign. Normally it never happens that the ileum and also the transverse colon contain bismuth while the caecum and ascending colon are empty. This vacancy in the shadow is not especially caused by the anatomical process but by a hyperaesthesia of the excited mucosa so that the colon does not permit the accumulation of the faeces, but frees itself promptly from it by visible contractions. Chronic ulcerative tuberculosis may occur in various portions of the colon but it is usually combined with more or less severe strictures. These strictures may be ring-shaped or may affect larger portions of the bowel which have the shape of a tube. The lung is usually involved in these cases.

**Colitis.** Catarrhal inflammation of the colon may be profitably studied by means of the \-ray, not so much to demonstrate the presence of the colitis as to show the portion of the bowel involved. Sometimes the pasticity attending the colitis involves the entire colon more often it is localized to certain segments, as shown by the \-ray. Following the barium meal the spasticity of the bowel is shown by the isolated scybalous masses scattered throughout the segments. Following the barium injection the pasticity is manifested by a narrowing of the smooth-edged shadow of the affected portion of the bowel.

Kienbock (20) cites Stierlin's statement that in ulcerative colitis the diseased portion of the bowel is always free from large quantities of barium and shows only a few long thin lines. The border lines of the intestine are parallel without the haustral markings and they enclose between them a very clear area which has an increased gas content. Schwarz and Novasinski report similar finding. All of these authors regard the condition as hyperaesthesia of the quickly emptying colon with a small residue remaining upon the ulceration of the intestinal wall. In long drawn out lines Kienbock report in detail three cases of ulcerative colitis — two with tuberculosis and one with dysentery.

In his conclusions he mentions the frequency of insufficiency of the ileocaecal valve in these cases. This has already been referred to by the writer.

In cases of mucous colitis one may occasionally actually show strings of mucus in the bowel thanks to the opaque salt which seems to find lodging in the twisted mucous shreds.

**Appendix.** Among the earliest studies are those of Holzknecht, Fittig and Weislog and

Jordan (21). A paper by the writer (22) in 1912 was the first American contribution to the roentgenology of the appendix. Since then there have been studies by George (23), Qumby (24) and Imboden (25) and by Rieder (26), Schwarz (27), Groedel (28), Cohn and Grigorjeff (29) and others in Europe. The general conclusion is that the normal appendix may fill with barium following the ingestion of a barium meal and occasionally following the injection of a barium clyisma. Provided the appendix fills, one may determine the presence or absence of adhesions or links, or involvement of neighboring viscera, and the relation between points of pain on pressure and the appendiceal shadow may be judged.

The question of drainage seems to be most important. If the appendix fills and empties itself it is not likely that the filling has any pathological significance. On the other hand a poorly drained appendix possesses a potency for danger in proportion to the length of time it requires for emptying. Neither the acutely inflamed appendix nor the obliterated appendix can be shown following the barium meal. However the conclusion is not warranted that the appendix is obliterated because it does not show in the roentgenogram. The appendix may lie retrocaecal in such a manner as to escape discovery even under the most careful fluoroscopic manipulation.

Dietlen (30) has described insufficiency of the ileocaecal valve as an important symptom of chronic perityphlitis. This view is shared by a number of other European investigators. It seems, however, that chronic perityphlitis is only one of the conditions with which ileocaecal valve incompetency is associated.

**Ileocaecal valve insufficiency.** In 1897 Max Hertz of Vienna while performing abdominal massage on a patient for colic like pains in the ileocaecal region observed peculiar symptoms which he could not explain otherwise than by the supposition that the contents of the caecum might be pressed backward. After further studies on patients as well as anatomical examinations he described a symptom complex of insufficiency of the ileocaecal valve which could clinically be found only in such patients as had disturbances pointing to the bowel such as constipation, abdominal pains, and sometimes diarrhoea.

Schwarz (2) makes the statement that these findings remained unnoticed or unbelieved until Case in 1911 first demonstrated roentgenograms showing the retrograde filling of the ileum after the barium clyisma. In fact the writer first called attention to this roentgen finding in 1909—

1910. Harnisch Holzknicht and Singer and Groedel soon confirmed these findings. Further articles have appeared on the subject by Dietlen (30) Rieder (3) Kellogg (31) Matsch (32) and the writer (33).

Insufficiency of the ileocecal valve is best demonstrated by the retrograde filling of the terminal ileum by means of the barium enema following the evacuation of the barium enema by spontaneous defecation. Examination of the competency of the ileocecal valve by means of the barium meal is unsatisfactory although the writer has reported a series of more than sixty cases in which there was a reflux of ingested food from the caecum back into the ileum.

The chief result of the incompetency is a prolongation of the emptying time of the ileum following the barium meal although occasional cases will be found in which ileal stasis is due to stenosis of the valve or to kinks of the terminal ileum. Nevertheless in the great majority of cases, in the opinion of Groedel (34) Kellogg Schwarz, Jordan (35) the writer (33) and others, the increased stasis in the ileum is one of the direct results of ileocecal valve incompetency.

In establishing the presence of insufficiency of the ileocecal valve Schwarz (2) uses irrigoscopy taking care that only one liter of fluid is used and that the irrigator is introduced only moderately high. Senn shows that even a normal valve may become insufficient by overdistention of the valve and that any massaging maneuvers in the ileocecal region are to be avoided. In order to make certain that the test will be absolute the writer has on the contrary advised massaging maneuvers over the ascending colon in the antiperistaltic direction and the introduction of a sufficient quantity of the enema to make certain that the caecum has been distended. Otherwise occasionally an incompetency of the ileocecal valve will be overlooked during the roentgen examination and be revealed later at operation.

The writer (33) holds that the insufficiency of the ileocecal valve is a symptom dependent upon obstruction lower in the bowel and is not a disease in itself. Kellogg (31) Schwarz (2) Groedel (4) Dietlen (30) and others are of the same opinion. The true cause of insufficiency of the ileocecal valve is the abnormal lack of tone of the structures which make up the valve—chronic overdistention of the right half of the colon particularly the caecum as the result of which the loosening of the connective tissue is quite natural. This distention of the right half of the colon is usually the result of chronic obstruction of the colon due either to adhesions of

the pelvic colon or to severe colitis with spasticity both of which conditions lead to increased antiperistalsis and distention of the caecum. These conditions lead to stasis and chronic changes in the appendix. This observation led some European observers particularly Groedel and Dietlen to believe that there was a direct connection between insufficiency of the ileocecal valve and chronic perityphlitis.

The writer (7) found insufficiency of the ileocecal valve in one-fourth of fifteen hundred cases of constipation. Dietlen (30) found twenty-two cases out of one hundred. Singer and Holzknicht (31) found three out of fifteen. It seems that the percentage of cases of constipation presenting ileocecal valve incompetency is nearly constant for different observers.

At the 1914 meeting of the American Medical Association (Section on Physiology and Pathology) the writer tabulated a series of twelve findings, most of them roentgenologic which seemed to indicate beyond a doubt that the ileocecal valve is normally competent protecting the ileum from a reflux of caecal contents. The first of these arguments is the observation first made by Cannon that the prevailing movement in the right half of the colon is antiperistaltic.

It is hoped that others will take up the study of this question especially in children to settle some of the questions which are not yet conceded by the surgeons.

*Mobile atonic caecum.* This condition first described by Wilms has been the subject of considerable study and no little controversy. Wilms, several years ago gave up his operation for fixing the mobile caecum. There is not sufficient space here to review all of the literature of this phase of the subject. Suffice it to say that much less importance is now being attached to the mobile atonic caecum the general consensus of opinion being that it is the fixed adherent bowel rather than the mobile bowel which is the seat of stasis and the source of symptoms.

*Abnormal position of the colon.* Congenital failure of the colon to rotate has been reported from the Mayo Clinic by Stuerlin de Quervain and several others. Hertz has reported one case of complete transposition of the rectum. The writer has seen one case. Doubtless there have been many unreported cases in which the roentgen examination has been utilized to demonstrate the anomaly.

Aberrancy of the sigmoid has been especially described by Pfahler. Special attention has been given the study of the pelvic colon by Pfahler Jaegers (12) and George and Garber (16).

Aberrancy of the sigmoid is not especially abnormal except through the enormous gas accumulations which are sometimes permitted. Pfahler shows that these gas accumulations may cause temporary obstruction by pressure against other loops of bowel.

Adhesions of the pelvic colon especially about the ilio-pelvic junction are more likely to be the real cause of constipation and resulting gas formation in these cases. The work of Eastman and others shows that extensive membraniform adhesions may result from extreme coprostasis without any visible constriction of the intestinal walls. Of course these adhesions may also result from salpingitis and other forms of irritation of the pelvic peritoneum.

The method of Jauges (12) is especially valuable in revealing abnormalities of the pelvic colon. It is often extremely difficult to differentiate between the deformity of the colon resulting from extensive sigmoidal adhesions and the filling defects attending carcinoma.

*Carcinoma of the colon.* Schwarz (2) divides carcinoma of the colon into several classes:

1. Carcinoma with high grade stasis
2. Carcinoma without stagnation of the contents of the colon

In the first group the patients present typical symptoms of chronic ileus. The abdomen is tense and expanded from the inflated bowel. The roentgen examination is indicated because the internist or the surgeon is not able to decide whether the obstacle belongs to the small or to the large intestine—a question upon the decision of which the manner and point of operative interference is considerably influenced.

It is probably wise to begin the examination in such cases with a barium enema following it later if necessary by the ordinary barium meal. When the lesion is thought to be in the colon the enema is likely to give the earliest information. The writer (37) has shown that even without the administration of barium it is possible in most cases, to locate the site of the obstruction thanks to the gas distention of the bowel almost universally present in these cases. If the central portion of the abdominal shadow is gas-distended showing the peculiar reticulated appearance characteristic of the small intestine it is likely that the obstruction is not in the colon but in the lower portion of the small intestine. If the caecum and ascending colon are gas-distended it is almost certain that the obstruction is in the colon and not in the small intestine.

In cases of obstruction beyond the hepatic flexure the caecum and ascending colon may form

an extremely dilated sack the thickness of a man's arm hanging low down into the pelvis. The content of the sack is usually fluid and is easily recognized by its horizontal level seen with the patient standing which becomes undulating when the patient is shaken. Above this fluid level there is usually a high grade gas-inflation of the hepatic flexure interlaced with haustral lines. In the middle of the transverse colon there may be another accumulation of the liquid seen only with the patient standing. When the obstruction is in the pelvic colon there may also be fluid levels at various points in the descending colon.

Except in the presence of stenosis the colon can never contain such quantities of fluid. In cases of catarrh or where there is liquefaction of the faeces in the colon these liquids are soon emptied. Stationary spaces filled with fluid and gas are found only in stenosis according to Schwarz.

Antiperistalsis alternating with onward peristalsis, can be seen in the colon proximal to the lesion associated with borborismus. The liquefaction of the content of the colon can only be determined when the patient is examined in the upright position. If the patient is so weak that he can not stand and it is necessary that the examination be made on the horizontal fluoroscope a correct diagnosis can be made from the prominent and sometimes really severe distention of the colon. Even in this position lateral studies with the tube on one side and the screen on the other with the patient flat upon his back may serve to demonstrate fluid levels surmounted by gas accumulations. Severe constant meteorism of the colon: a constant finding in organic colonic obstruction although not pathognomonic of malignant obstruction.

In carcinoma of the large bowel without stagnation of the content of the colon the following may be stated as a summary of the findings (38):

1. Exaggeration of colonic antiperistalsis giving the appearance of peristaltic unrest (Case) to the barium content above the site of the lesion with arrest or hindrance in the onward progress of ingested barium.

2. Arrest or noticeable hindrance in the ascent of the barium column when giving the barium enema.

3. Coincidence of a palpable tumor with a point of hindrance to the barium meal or barium enema.

4. A filling defect in the shadow of the barium-filled colon. Frequently the filling defect is diplicated indicating a cauliflower growth. At times it may be annular so that one may diagnose an annular carcinoma.

1910 Harnisch Holaknecht and Singer and Groedel soon confirmed these findings. Further articles have appeared on the subject by Dietlen (30) Rieder (33) Kellogg (31) Katsch (32) and the writer (33).

Insufficiency of the ileocecal valve is best demonstrated by the retrograde filling of the terminal ileum by means of the barium enema following the evacuation of the barium enema by spontaneous defecation. Examination of the competency of the ileocecal valve by means of the barium meal is unsatisfactory although the writer has reported a series of more than sixty cases in which there was a reflux of ingested food from the cecum back into the ileum.

The chief result of the incompetency is a prolongation of the emptying time of the ileum following the barium meal although occasional cases will be found in which ileal stasis is due to stenosis of the valve or to kinks of the terminal ileum. Nevertheless, in the great majority of cases, in the opinion of Groedel (34) Kellogg Schwarz, Jordan (35) the writer (33) and others the increased stasis in the ileum is one of the direct results of ileocecal valve incompetency.

In establishing the presence of insufficiency of the ileocecal valve Schwarz (2) uses irrigoscopy, taking care that only one liter of fluid is used and that the irrigator is introduced only moderately high. Senn shows that even a normal valve may become insufficient by overdistention of the valve and that any massaging maneuvers in the ileocecal region are to be avoided. In order to make certain that the test will be absolute the writer has, on the contrary, advised massaging maneuvers over the ascending colon in the antiperistaltic direction and the introduction of a sufficient quantity of the enema to make certain that the cecum has been distended. Otherwise occasionally an incompetency of the ileocecal valve will be overlooked during the roentgen examination and be revealed later at operation.

The writer (33) holds that the insufficiency of the ileocecal valve is a symptom dependent upon obstruction lower in the bowel and is not a disease in itself. Kellogg (31) Schwarz (2) Groedel (34) Dietlen (30) and others are of the same opinion. The true cause of insufficiency of the ileocecal valve is the abnormal lack of tone of the structures which make up the valve—chronic overdistention of the right half of the colon particularly the cecum as the result of which the loosening of the connective tissue is quite natural. This distention of the right half of the colon is usually the result of chronic obstruction of the colon due either to adhesions of

the pelvic colon or to severe colitis with spasticity both of which conditions lead to increased antiperistalsis and distention of the cecum. These conditions lead to stasis and chronic changes in the appendix. This observation led some European observers particularly Groedel and Dietlen to believe that there was a direct connection between insufficiency of the ileocecal valve and chronic perityphlitis.

The writer (7) found insufficiency of the ileocecal valve in one-sixth of fifteen hundred cases of constipation. Dietlen (30) found twenty-two cases out of one hundred. Singer and Holaknecht (11) found three out of fifteen. It seems that the percentage of cases of constipation preventing ileocecal valve incompetency is nearly constant for different observers.

At the 1914 meeting of the American Medical Association (Section on Physiology and Pathology) the writer tabulated a series of twelve findings, most of them roentgenologic which seemed to indicate beyond a doubt that the ileocecal valve is normally competent protecting the ileum from a reflux of cecal contents. The first of these arguments is the observation first made by Cannon that the prevailing movement in the right half of the colon is antiperistalsis.

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Tschistjakoff N. L.: Resection of the Upper Jaw in Malignant New Growths (Zur Frage der Resektion des Oberen Kieferknochens bei bösartigen Neubildungen). *Chir. u. Gynäk.* 1914, 187.  
By Zentralbl. f. d. ges. Chir. 1 Grenz b.

This statistical work includes 7 cases of malignant new growths of the upper jaw, 48 of them sarcomata and 29 carcinomata from 1884-1912. Of the 77 cases, 45 of sarcoma and 2 of carcinomata were operated on; 7 cases were inoperable.

The ages of the carcinoma cases 37.4 per cent ranged from 40 to 60 years, the sarcoma cases from 10 to 20. The most frequent point of origin of the tumors was the mucous membrane of the alveolar process and the maxillary sinus, 28.5 per cent of the carcinomata and 42.5 per cent of the sarcomata originating there. Microscopical examination of the carcinomata showed 111 micellular carcinomata, 4 glandular, 1 alveolar and 1 squamous epithelioma.

The 36 sarcomata were distributed as follows: globular-celled, 9; fibrosarcoma, 8; osteosarcoma, 7; osteoid fibrosarcoma, 1; myxoid fusiform-celled, 2; giant-celled, 1; myxosarcoma, 1; cystosarcoma, 1; angiosarcoma, 1; endothelial sarcoma, 1; polymorphous cells, 1. Among the 25 operations for carcinoma 10 were complete resections, 1 of them bilateral and 6 partial resections. Among the sarcomata there were 34 complete resections, 3 of them bilateral and 13 partial ones. There was preceding ligation of the carotid artery in 8 cases. Delfinbach's incision was used in 61 per cent of the cases. Kocher's, Verhoeff's and Langenbeck's, and others.

After the operation only 1 case died, 15.5 per cent. Most of the cases of death were purulent meningitis; 1 case embolus of the Sylvian fossa in 1 and a uterine aneurysm. Report of the ultimate result could be obtained from only one third of the patients.

Of the 10 complete resections the further fate of 10 is unknown in 4, the recurrence after 1 month in 1, after 6 months in 1, after 10 months in 1, after 34 months in 1, after 23 months in 1, after 4 months in 1.

Of the 11 partial resections 11 patients died as reported in 11, the things known in 5, in 2 there was recurrence while still in the hospital, 1 died of recurrence after 4 months, after 1 year 1 after 13 months and 10 months in 1. The 15 cases are still on after 6 months, 2 after 7 months, 1 after 13 months and 1 after 4 months, 55.3 per cent there is no recurrence more than 3 years.

Rinderspach, H.: Value of Lumbar Puncture in Medical and Surgical Judgment of Head Injuries (Die Bedeutung der Lumbalpunktion für die Begutachtung Kopfverletzungen). *Archiv f. d. Med.* 1914, 43.  
By Zentralbl. f. d. ges. Chir. u. Grenz b.

In patients who bring you for head injuries and complain of headache, intolerance for alcohol, etc.

especially when there are no objective symptoms and malingering is suspected, the author recommends lumbar puncture in the prone position. An increase in pressure indicates an anatomical lesion inside the skull, irritation of the meninges or chronic serous meningitis. Normal pressure does not prove that there is no lesion, but shows that in cases that are positive at first the organic changes are no longer exercising an irritant effect on the meninges. It is important in differential diagnosis that in pure neurasthenia the lumbar pressure be normal, on the other hand it is increased on pressure taking of alcohol and often in anemia and arteriosclerosis. It is important with reference to later examinations that the pressure of the cerebrospinal fluid should be determined and a microscopic examination made of it immediately after a trauma of the head.

GRASSET

Dunn, A. D.: Pituitary Disease: a Clinical Study of Three Cases. *Am. J. M. S.* 1914, vol. 11, 4.  
By Surg. Gynec. & Obst.

Dunn presents a clinical study of three cases of pituitary disease of different types. He emphasizes the value of good X-ray plates in obscure disorders of growth of sexual development and activity and in symptoms pointing to intracranial trouble. Disturbances of vision, migraine, epileptic attacks, psychical anomalies, and trophic disorders—such as obesity, infantilism, impotence, gigantism, dwarfism, menstrual disturbances without pelvic explanation—should call for an X-ray examination.

He concludes with a scheme of classification of disturbances of pituitary function as follows:

- 1 Affections of the pars anterior
  - a Hyperfunction—acromegaly, gigantism
  - b Hypofunction—true or pituitary dwarfism—nicho, dystrophic rachitis or cretinic dwarfs
- 2 Affections of the pars posterior
  - a Hyperfunction—diabetes insipidus
  - b Hypofunction—hypophyseal obesity—dystrophic adiposogenitalis
- 3 Mixed affections
  - a Hyperfunction of the pars anterior with hypofunction of the pars posterior—acromegaly with hypophyseal obesity
  - b Hypofunction of both lobes—dwarfism with hypophyseal obesity
  - c Hypophyseal disturbance in conjunction with parathyroid activity of both glands
  - d Ovarian or testicular hypofunction with hyperfunction of the pars anterior—acromegaly with sexual impotence—eunuchoid giants
  - e Hypofunction of the pars anterior—pituitary dwarfism with sexual impotence
  - f Hypofunction of the pars posterior—dystrophic adiposogenitalis
  - g Associated with disturbances of the function of the parathyroid gland, the adrenal, pancreas, thyroid, pineal gland, thymus (status thymoparaticus), etc.

Roeder, H.

# ABSTRACTS OF CURRENT LITERATURE

## GENERAL SURGERY

### SURGICAL TECHNIQUE

#### ANÆSTHETICS

Gray H M W Discussion on the Evolution of the Shockless Operation—Anoci Association. B I M J 9 4, 2, 349 By Surg Gynec & Obst

The author considers the subject from the clinical side only. He has for many years been using local anesthesia and looks upon it as the most important means for the prevention of pains and therefore shock. He looks upon general anesthetics narcotics and other precautionary measures merely as adjuvants to the local anæsthetic and argues against needless and protracted preparation before operation. In order to exclude external impressions during immediate preparation and actual operation after receiving an injection of omnopon the patient's eyes are covered with lint or cotton wool pads and the ears are stopped with moist cotton wool. Of the three general anesthetics—chloroform ether and nitrous oxide—he thinks the latter in skilled hands is the best but that for general use the open drop ether method is preferable. His method of using a preliminary narcotic is as follows:

The night before operation a good night rest is

assured the patient by giving 5 grains of veronal at 5 P M and again at 9 P M. One and one half hours before operation two-thirds of a grain of omnopon is given with 1/150 grain scopolamine in 17 minims of water. This produces an agreeable indifference to what is taking place and apprehension is removed. Gray has long ago given up spinal anesthesia; he relies on nerve blocking and local infiltration. In abdominal cases he blocks the intercostal and lumbar nerves in the subcostal groove and as far back in the loin as convenient. To save time and prevent post-operative pain more certainly he infiltrates the skin and subcutaneous tissue along the line of incision. He is now using a solution of novocaine 0.25 per cent potassium sulphate 0.4 per cent and 12 drops of (synthetic) adrenalin to each 100 ccm. This was introduced by Hoffmann and Kochmann. Gray calls it an N P A solution—novocaine-potassium adrenalin—No-Pain After. Of this solution 80 to 120 ccm may be used. He states that in over 2,000 abdominal operations shock was present in only two—and in both cases dread of operation had dominated the patient's mind for weeks.

M S HENKSON

## SURGERY OF THE HEAD AND NECK

#### HEAD

Bonola T. Technique for Intraosseous Injection of the Superior Maxillary Nerve at the Foramen Rotundum (Diana T. J. C. P. L. M. J. 9 4, 2, 349). Bull d. m. d. 9 4, 2, 66. By Zentralbl. f. d. ges. Chir. Göttingen.

The author asserts that the previously described methods of injection of the superior maxillary at the foramen rotundum are too difficult and uncertain and sometimes too dangerous. These disadvantages are overcome by a new method of supra-orbital puncture with a dull lumbal puncture needle which has a curvature of 75 degrees from the end and is somewhat notched 5 cm from the end. The needle is inserted at the angle between the ascending and horizontal branches of the zygoma as near as possible to the horizontal branch

and kept perpendicular to the horizontal branch so that the convexity of the needle is directed upward. The needle must be carried in the same direction until bony resistance is felt at a depth of about 3 cm. This resistance is offered by the crista sphenotemporalis, which separates the temporal and zygomatic fossae and whose lower end must be found by gently pushing the needle downward. Then the needle is pushed farther in to about 5 cm so that the end of the needle reaches the highest point of the fossa pterygomaxillaris and the superior maxillary nerve.

The only uncertainty in the method is offered by possible anomalies of the crista but these are rare as in 500 autopsies they were found only 23 times and they only interfere with the method when there is abnormal genesis of the crista. The method does not endanger any important nerves or vessels.

STRAUCH



Schleidt J The Hypophysis in Feminized Males and in Masculinized Females (Über die Hypophyse bei feminisierten Männern und maskulinisierten Weibern) *Z f H f Phy d* 914 1911 1179 By Zentr lib f d ges Gynak. Geburtsh u d Grenzgeb

A report is given of the histological studies of a series of rats consisting of sexually normal animals castrated ones and ones in whom after castration gland of the other sex had been implanted. As in these feminized and masculinized animals the effect of the generative part of the genital glands was excluded by the transplantation and only the interstitial part was active a study could be made of the question of whether the changes in the hypophysis after castration described by Ascherl were due to the lack of the generative or the interstitial part of the glands. The results were a decrease of eosinophile cells and the appearance of large vesicular cells with pale nuclei and vacuoles in the hypophyses of the castrated animals. On the contrary in the masculinized and feminized animals the hypophyses showed the type of sexually normal animals with the exception of one in which one of the implanted glands was completely absorbed — in this case solitary vacuolar cells with vacuoles. This seems to show that the changes in the hypophysis after castration are due to the lack of the interstitial part of the male and female sexual glands. *SALLÉ*

## NECK

Wickert F E Tumors of the Neck. *S f G r u Ob t* 94 1914 By Surg Gynec & Obst

Tumors of interest from an embryological or developmental point of view occurring in the neck are of great importance on account of their comparative frequency and difficulty of diagnosis. The records of the Royal Victoria Hospital during the past ten years showed 15 cases of branchiogenic cysts of branhiogenic carcinomas of the thyroglossal cysts and of a thyroid body tumor. A review of the embryology and development of the neck was considered rather in detail in order that a better understanding of these tumors might be obtained. The main features discussed were the formation of the pretracheal pouch, the entire development of the thyroid from the floor of the mouth, the fate of the ultimobrachial bodies and finally the development of the thyroid body from the sympathetic system.

In reviewing the records of the cases reported it was pointed out that the branchiogenic cysts are usually of slow growth but may suddenly increase in size on account of infection or malignant change. Branchiogenic carcinomas are very malignant and most frequently found in those more than 50 years of age. In regard to thyroglossal cysts the frequency of occurrence was noted due to the fact that the growth had not completely disappeared the cyst wall often to difficulty follow growth

or behind the hyoid bone. Carotid body tumors are usually of slow growth are looked upon as benign tumors, and are very difficult of removal on account of their situation at the bifurcation of the common carotid one of the vessels usually requiring ligating in attempts at removal.

In conclusion it was pointed out that in all neck tumors a thorough examination of the mouth pharynx and larynx was necessary to exclude the possibility of disease in that region and particular emphasis was laid on the fact that the study of these tumors involved the study of the tumors occurring in the parotid submaxillary region (parotid or mixed tumors) and it was suggested that these tumors should be called arch tumors (1 or 2) because all the tissues are found present which take part in the formation of the arch (cartilage etc.).

From the many complicated changes occurring in this region it is not difficult to assume that the snaring off of embryonic portions of these arch structures could easily account for the mixed tumors found in this situation.

Grumme Theory of Basedow's Disease Myxedema, Cretinism and Mountain Goiter Hyper- and Hypothyroidism (Zur Theorie von Morbus Basedowii Myxedema Cretinismus und Goiterkropf) *H y p e u H y p o t h y r o i d i s m u s* *Berl M B h sch* 194 1913

By Zentralbl f d ges Ch u Grenzgeb

The author discusses the view of Marimon of Barcelona that there is no such thing as hyperthyroidism but that (1) myxedema and cretinism are due to defective utilization by the thyroid of the iodine taken in with the food, the organism does not get enough metabolized iodine and (2) in Basedow's disease the iodine that gets into the blood is not sufficiently metabolized so that the body is flooded with unmetabolized that is injurious iodine.

The author comes to the conclusion that natural iodine albumen after it has been changed into a form peculiar to man serves as a hormone in the internal secretion.

The first cause of myxedema is a lack of iodine in the nutrition that of Basedow's disease a functionally weak thyroid gland with sufficient or excessive iodine in the nutrition. From this it follows that in myxedema there is a lack of the peculiar form of iodine that arises from transformation in the thyroid gland in Basedow's disease the excess is an excess of foreign organic iodine.

Grumme draws the following practical conclusions: (1) Cretinism and myxedema as well as endemic goiter are favorably affected by thyroid iodine. (2) The endemic goiter of mountain regions is also decreased in size by inorganic iodine but more so by gastric iodine albumen preparations. (3) In Basedow's disease any form of iodine is injurious. (4) In apparently simple goiter which is often a precursor of Basedow's disease iodine is also harmful.

B R TH

**Chlari R:** Are All the Heart and Blood Vessel Symptoms in Basedow's Disease Due to the Disease (Sind alle bei Morb's Basedow oder handenen Herz- und Gefäßerscheinungen Basedow Symptom)? *Ztschr f. Chir. u. Gyn.* 1914, 80

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

This work tries to clear up the injurious effects on the heart in Basedow's disease. The author calls attention in the first place to the fact which has been proven anatomically that there is no definite relation between the heart symptoms and the other Basedow symptoms. Myocarditis which would be expected in severe cases in analogy with other processes causing heart insufficiency is rarely found.

The heart symptoms cannot be explained through

the specific effect of the Basedow's disease but are to be attributed to different functional disturbances which are generally present before the beginning of the Basedow's disease but only become manifest after it develops. An important point is that the history of Basedow patients often shows a hereditary taint of rheumatism, scarlet fever, chorea, kidney disease or congenital hypoplasia of the blood vessels. Such antecedents serve as a basis on which Basedow's disease may develop. If valvular disease is already present the Basedow's disease hastens the insufficiency resulting from it. The foundation of the heart symptoms in Basedow's disease is to be attributed to changes in the heart in youth and to a degenerative predisposition—*habitus asthenicus*.

H. HZ.

## SURGERY OF THIL CHEST

### CHEST WALL AND BREAST

**Lamper:** Castration in Cancer of the Breast (Kastration bei Mammakarzinom). *M. d. Chir.* 1914, 10, 4, 333-334

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author observed in five cases that carcinoma of the breast was favorably influenced by castration and the effect was not creble a few days after the operation. In one case the primary tumor decreased in four weeks to one third of its original size and the enlarged axillary glands disappeared completely. This method suggested by Beatson has only a palliative value but used as a preliminary operation before radical amputation of the breast it may improve the result.

RICHMAN.

**Feuchert:** Technique of Extra-pleural Resection of the Thorax in Old Cases of Empyema (Die Technik der extra-pleural Resektion bei alten Empyemen). *Brit. M. Ch.* 1914, 48

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author recommends the operative treatment of old cavities from empyema in four stages: (1) The first consists in a free opening of the thorax at the lower end of the cavity followed by aseptic tamponade and irrigation. (2) In the second the posterior or thoracic wall of the cavity is incised. (3) While in the third the anterior wall is incised. (4) Last Schede's flaps are freely divided and the thickened pleura are freely incised and are made in the pleura.

In smaller cavities stages two and three and some times four can be combined. The author has operated on 10 cases of metapneumonic empyema in this way and one case of tubercular empyema—no deaths resulted. Examination showed that there were no general con-  
 dition was good. had a  
 small bronchial fistula. on  
 Often after the 3rd day the

first stage there is free discharge of secretion, fall in temperature and surprising improvement in the general condition.

NAGELL.

**Bernard Léon and Paraf J:** Th. Origin of Pleural Effusions following Pneumothorax in the Tubercular—Natural and Artificial Pneumothorax (L'origine des épanchements pleuraux consécutifs au pneumothorax naturel ou artificiel). *Bull. Soc. d'et. d. sc. m. nat. Paris* 1914, 9

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The pleural exudates that frequently follow a spontaneous or artificial pneumothorax are almost all caused by the tubercle bacillus and not by a secondary infection. They are generally serous at first gradually become turbid and if they last long enough finally purulent. Independently of the character of the exudate bacilli are often found in it in such great quantities that they can be found in a simple smear and often in such small numbers that they can only be demonstrated by inoculation in animals. The course and character of the pleuritis are not influenced by these differences. In the exudate after spontaneous pneumothorax there are generally many tubercle bacilli after artificial pneumothorax only a few.

The authors concluded that this difference was due to the fact that spontaneous pneumothorax is generally an open or valvular pneumothorax while the artificial pneumothorax is closed and they tried to find whether there was a constant relation between the kind of pneumothorax and the number of bacilli in the exudate. They tried to determine the kind of pneumothorax by the intrapleural measurement of pressure with Kuss's insufflation apparatus and by the injection of an aqueous solution of methylene blue into the pleural cavity.

In open pneumothorax the pressure is the same as or lower than the atmospheric pressure and the excretion blue in valvular pneumothorax the pressure

is higher than the atmospheric and the excretion uncolored in closed pneumothorax the intrapleural pressure is negative but rises on insufflation of gas and the excretion is not colored blue. The reliability of this method of examination has been confirmed many times on autopsy. The bacteriological examination of the pleural exudate at the same time showed that in fact in open and valve pneumothorax there were always large numbers of a bacilli while in closed pneumothorax it was almost free of bacilli.

The purely tubercular nature of pleural effusions after pneumothorax makes it probable that with the beginning of the latter there is frequently an irruption of greater or smaller numbers of bacilli into the pleural cavity. In open and valve pneumothorax this may come about from the fact that the tubercular patient coughs into his pleural cavities to a certain extent through his pleuropulmonary fistula. This is generally the case in spontaneous pneumothorax.

In artificial pneumothorax the breaking down of adhesions opens the way to the pleural cavity for the bacilli. If a fibrous pachypleuritis with a few small tubercles is the cause of the adhesions when they are broken down only a few foci of bacilli are set free and a little exudate free of bacilli enters the pneumothorax remains closed. But if there was extensive caseous pleuritis with the breaking down of the adhesions a pleuropulmonary fistula might easily arise the pneumothorax become open and an abundant irruption of bacilli take place. Operative injuries of the lung in the insufflation of gas are more rarely the cause of lung fistulae and the entrance of many bacilli.

In the discussion RISK and REYOV confirmed the essential points of the authors. HARRIS

Lyon J. A. Therapeutic Art II I Pneumothorax  
Associat Treatment of Pulmonary Tuberculosis  
A Preliminary Report of Sixty Two Cases. B. I. M. & S. J. 941 39  
By Surg. Gynec. & Obst.

With few exceptions all of the cases reported were bilateral. It has been the author's rule to refrain from at once establishing a complete collapse of one lung when the disease tends beyond the apex in the opposite lung. The greatest value of artificial pneumothorax lies in relieving the cough, the amount of expectoration, and the toxæmia by restricting the mobility of the more extensively diseased lung. Later conditions are favorable a complete pneumothorax may be established. In several cases following this treatment all physical signs of the disease have disappeared at the apex of the untreated lung. This change is credited to the diminishing of the cough, expectoration and toxæmia.

The failures are recorded under three headings: (1) unilateral case with intense pleural adhesions; (2) cases in which an active process in both lungs has extended beyond the apices; and (3) cases which

were rapidly reaching the terminal stage. On account of the simplicity of the method the Forlanini operation was used. The technique is given in detail.

Pleural shock, cardiac dilation, infection, spontaneous pneumothorax, air embolism, pulmonary hemorrhage and recrudescence in the untreated lung are the chief dangers accompanying induced pneumothorax.

Of the 62 cases treated 2 were incipient and treatment was given to relieve frequent hemoptysis. The lungs in both instances have remained collapsed and there has been no return of the hemoptysis. There were 31 cases in the moderately advanced stage of the disease, 2 in which the prognosis was questionable, 17 unfavorable and 12 bad. In three instances the lung was collapsed to relieve hemorrhage and the experiment was successful. The treatment had to be discontinued with two of the patients on account of a recrudescence of the disease in the opposite lung. One developed a severe hemoptysis in the uncollapsed side and the treatment had to be abandoned. Four had to be discontinued on account of a recrudescence in the opposite lung in one on account of neurosis. In 3 because a sufficient amount of gas could not be introduced to insure results. In two instances the treatment was abandoned on account of the occurrence of pleural shock as the patients became unconscious. The treatment was discontinued in still another case which developed appendicitis. One patient died following a spontaneous pneumothorax and the treatment was discontinued in another case on account of adhesions at the base of the opposite lung causing marked dyspnea.

Of the 15 remaining patients 5 have been discharged and are doing well, 3 of this number are at present employed. The treatment is being continued satisfactorily in the remaining 10 cases, many of whom will soon be discharged.

The greatest number of injections made in a given case was 28, the maximum amount given was 700 ccm and the minimum amount was 50 ccm with the exception of the patients suffering from pleural shock to whom none was given. In the 29 far advanced cases the prognosis was unfavorable, 10 and bad in 10. The treatment was discontinued: 8 instances on account of recrudescence in the untreated side, 4 on account of neurosis, 10 on account of severe underlying pleural adhesions. One died of acute cardiac dilation and pulmonary oedema. Of the 6 remaining patients one has been discharged as arrested and 5 are progressing satisfactorily. The treatment was discontinued in another instance on account of pruritus and the one case remaining is a spontaneous pneumothorax, the collapsed lung being maintained by occasional introductions of gas.

When the results of the treatment are analyzed it must be understood that in almost every instance the prognosis was not encouraging and was in most instances exceedingly bad. Of the 62 cases treated

58 were bilateral and 4 were unilateral. The treatment was discontinued in 13 cases on account of dense unyielding pleural adhesions, and in 12 on account of recrudescence of the disease in the untreated side.

EDWARD L. CORNELL.

Uffreduzzi O: Surgical Treatment of Pulmonary Tuberculosis. *Internat J Surg* 9:4:275  
By Surg Cyneec & Obst

Among the recent methods of surgical treatment of tuberculosis of the lung has been the resection of the first rib by Freund who believes that compression of the lung apex causes a poor blood supply. Shrinkage of the diseased lung has also been tried by ligating branches of the pulmonary artery. Next pneumothorax was advocated by Forlanini; this was limited in application to unilateral tuberculosis and a chest free from adhesions. When adhesions are present Friedrich Bauer and Schede have resorted to thoracoplastica extrapleurica. If the lower lobe is involved phrenectomy in the neck has been done.

The author has killed animals four months after phrenectomy had been done and found the lung perfectly aërated throughout; no changes had occurred. Sauerbruch has performed it on a few cases with favorable results.

Pneumothorax is the best surgical treatment next to which comes thoracoplastica extrapleurica as done by Wilms. Phrenectomy is a relatively simple operation and may be used in tuberculosis of the lower lung in conjunction with thoracoplasty.

LEGA & CARV

## TRACHEA AND LUNGS

Good R H: Removal of Two Nails from Bronchi of Child Two Years Old. *Internat J Surg* 9:4:364  
By Surg Cyneec & Obst

This case was seen early and was taken shortly after the accident closing two nails heads down one in each bronchus. The child became very cyanotic at times because the heads of the nails closed the lumen of the bronchi.

Brucenaga's small tracheoscopic tube was used and the nails were removed by grasping them with forceps—the tube being held and nail being removed at the same time as the diameter of the heads of the nails was greater than that of the tube. The patient was kept in a steam tent for two days and the throat occasionally sprayed with adrenalin and cocaine. At the end of 36 hours a light oedema of the glottis developed but soon subsided.

The author emphasizes the importance of immediately taking x-ray pictures of these cases and the use of short exposures—one tenth to one fifth of a second. Foreign bodies should always be removed as soon as possible. Tracheotomy is not advised as it greatly increases the mortality and is not necessary.

ELGE C

Henrichsen K: Experiments in Intrathoracic Surgery of the Lung. (Experimentelle Intrathorakale Lungenchirurgie). *Beitr Klin Chir* 19:4:373  
By Zentralbl f d ges. Chir. Grenzgeb

The author performed the following experimental operations:

1. The bringing of the lower lobe under the diaphragm in order to attain as great contraction as possible from compression.

2. Enveloping a lobe of the lung in a purse-like covering of transplanted fascia to produce lobar compression of only one lobe.

3. The use of a flap of fascia to hermetically close the bronchial stump in extirpation of a lobe of the lung. It is well known that extirpation of a lobe of lung often fails because this stump is not perfectly taken care of and mediastinitis results. The care of the bronchial stump is a technical problem that has not yet been solved.

4. Strengthening Trueta's peribronchial suture of the bronchus after rupture of the bronchus or bronchotomy by placing a strip of fascia around it as well as permanent ligature of a bronchus with a strip of fascia or tendon.

5. The placing of the lower lobe under a flap of fascia fastened to the diaphragm to attain intense compression of the lung.

6. The artificial raising of the diaphragm to support the lung in compression.

7. Compression of the lung from above and below by the insertion of two flaps of fascia.

Among these numerous new methods the author is only ready to report on the first. The experiment is, which were made on dogs, showed that the artificial displacement of the right as well as the left lobes of the lung under the diaphragm caused intense compression of the lung. The lung, compressed between the diaphragm and the liver showed a marked degree of compression at lectasis. All of the animals except one which died of pleurisy from the operation survived.

The author proposes that this should be used as an early operation in bronchiectasis of the lower lobe in human beings. It leads to a degree of compression of the organ that cannot be attained by any other operation.

WILKE

## HEART AND VASCULAR SYSTEM

Carrel A. and Tuffier T: Pathological and Experimental Study of Surgery of the Orifices of the Heart. (*Etude anatomico-pathologique et expérimentale de la chirurgie des orifices du cœur*). *Presse Méd* 9:4:73  
By Zentralbl f d ges. Chir. Grenzgeb

In operating on the heart because the kind of anastomosis is important as well as the condition of the heart and blood vessels. According to the authors' research in arterial stenoses, some aortic stenoses, and some pulmonary stenoses may be operated on.

The dangers of pericarditis consist in the



coronary arteries hemorrhage entrance of air into the heart and vessels and in the formation of thrombi. The coronary veins can be ligated with out danger but ligation of the arteries is well borne only in the periphery segment. The severity of the hemorrhage depends on the size and direction of the wound. Hemorrhages from the right auricle are the hardest to control. The entrance of air into the left ventricle is a very grave accident as is also the formation of thrombi. The so called dangerous zone in the heart muscle includes the coronary arteries from their mouth to the first bifurcation and the septum between the two auricles. An incision in the region of the boundary between the auricle and ventricle causes immediate cessation of heart action as Haecker and Schepelmann have shown. Also at the boundary of the upper and middle thirds of the anterior longitudinal groove there is a point the mechanical irritation of which immediately stops the heart.

Among the methods for temporary hemostasis the authors believe the one best borne is compression of the superior and inferior vena cava as recommended by Haecker. Internal and external valvulotomy is practiced in the treatment of stenosis the former is accomplished by making an incision with a suitable instrument either near the contracted plate or at a distance from it. Another method of treating stenosis is to form an anastomosis between two points above and below the contracted place. An intercostal incision is recommended as the best mode of approach to the heart. Several cases have thus concluded the work. HARKINS

### PHARYNX AND ESOPHAGUS

Syring, Clin. cal. and Experimental Study of Plastric Operation on the Esophagus (Kl. u. exp. u. d. 1. perist. u. l. u. r. Esophagusg. l.). De t. k. 71. k. f. Ch. 9. 4. 21. 60. By Zent. albi. f. d. ges. Chir. G. engelb.

The author reports the case of a 37 year old girl on whom a plastic operation was performed on the esophagus for stricture following coarctation with silver nitrate solution. A loop of jejunum was used beginning about 35 cm below the jejunoduodenum fold about 0.5 cm of the jejunum was freed of its mesentery, sectioned transversely at the lower end, drawn up through a slit in the mesocolon and the upper opening sutured into the arch of the thorax so that the motion was of course antiperistaltic. The esophagus was divided with the stomach by anastomosis at the natural anastomosis made between the plantar loop distal end of the jejunum which had been closed. The plantar loop was anastomosed to the stomach by silk suture and the loop was opened at the level of the nipple, removed and nourished by the upper respiratory tract. The operation was successful. Food given through Witzel's fistula had been abundant before the operation was ejected a short time after being given through the upper open-

ing it was sometimes mixed with bile and amounted to as much as 1,950 ccm daily. An attempt was made to prevent this first by sectioning the transplanted loop between the anastomosis in order to prevent regurgitation from the duodenum and later by separating the mesentery at it attached to the loop in order to cut off nervous influence. These attempts were unsuccessful and the patient died of pulmonary tuberculosis which had developed meanwhile.

The previously published case reports have held that peristalsis in the transplanted loop was of no significance. In Roux's method the loop is placed in such a position that peristalsis takes place in the normal direction but in this case it was so much more convenient that the antiperistaltic direction was deliberately chosen because it had always been reported that the direction of peristalsis made no difference and that peristalsis gradually stopped. The preceding case shows that this idea is misleading and dangerous. Syring believes that this case shows that the autonomous system of ganglia in the intestinal wall determines the intestinal movements. He thinks also that in his patient perhaps the increased vagotonus influenced the course of the condition and that the results of this method would not have been so bad in a patient without vagotonus.

He then takes up the discussion of the published cases that are not in accord with his results. His case caused him to take up experimentally in dogs the method proposed by Janu of forming a tube from the greater curvature of the stomach because he thought that there must be the same disadvantages in this because of the antiperistaltic movement of the new tube. Five of the seven dogs died before the sixth day so that it was only possible to observe the effects of the Janu operation for a longer time than that in two cases. In these there was absolute insufficiency of the gastrostomy to such an extent that one dog whose history is given though it ate greedily died from malnutrition after about 6 weeks. Actual peristaltic movements were not observed in the discharge of the food from the tube but Syring thinks that peristalsis probably played a part in it. For this reason he believes that Janu's method although it is technically easy to perform and gives good conditions with relation to the nutrition of the tube is not without danger at any time. Meyr's suggestion should be carried out to carry the serous coat at the point of entrance into the stomach so as to cut off the nerve conduction to the tube as much as possible and also by torsion of the tube according to Gussen's method the communication between the tube and the stomach should be made as small as possible so as to make the passage of stomach contents to the tube difficult. He also recommends atropin and papaverine to decrease vagotonus. Because of the antiperistaltic motion he also rejects on his suggestion to separate the stomach in front of the pylorus and to plant it to form an esophagus. LITZEN

## SURGERY OF THE ABDOMEN

## ABDOMINAL WALL AND PÉRITONEUM

**Druner:** The Arched Epigastric Incision (*Der bogigefranzte Bauchschnitt im Epigastrium*) *Zentralbl. f. Ch.* 1914, 21, 84

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

In order to spare the nerves, fascia and muscles the author recommends the lateral pararectal oblique incision in the lower part of the abdomen and in the region of the epigastrium an arched incision opening downward. Both incisions are described in detail, and are considered better than the ones heretofore in use. The former is made near the sheath of the rectus separating the aponeuroses in the direction of their fibers. In the other the skin, fatty tissue and external sheath of the rectus are cut in an arch shape; then the rectus is drawn to one side and the posterior sheath of the rectus and peritoneum opened or if more space is needed the rectus itself is incised on one or both sides. The author has always had excellent results with this incision.

KNOKE

**Gulbé, M.** Adenomatosis of the Umbilicus (*Les adénomes de l'ombilic*) *Rev. de St. Et. et de Ch.* 1914, 21, 11, 79

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

All known cases except one were in women. There is no connection between adenoma of the umbilicus and pregnancy. The adenoma arises from the size of a hazel nut to that of an orange and may be sessile or peduncled. There is no sharp boundary between the tumors and the neighboring tissue. They consist of firm connective tissue containing muscle fibers and tubular glands sometimes branching and sometimes showing cystic degeneration embedded in cytogenous stroma. The epithelium in the non-dilated glands cylindrical and ciliated in the dilated ones. It varies from the cubical to the pavement type. The glands are filled with a brownish black substance in the connective tissue there is abundant hemorrhage and pigmentation.

The symptoms consist of pain which increases at the menstruation time; there may also be hemorrhage from the tumor; at that time and a rapid increase in the size of the tumor; otherwise the growth of these tumors is very slow. Some authors have held that they originate from sweat glands; some from remnant of the omphalomesenteric duct and some from aberrant parts of Müller's duct. The author thinks that these theories are improbable and believes these adenomata have the same origin as the retro-uterine adenomyosis of Meyer—that is, metaplasia of the peritoneal endothelium. As to the clinical history a case of Firket's of multiple cysts of the peritoneum and omentum which had ciliated epithelium also recalls the fact that the peritoneal epithelium in certain animals has cilia.

The tumors are to be regarded therefore as pseudo-tumors.

ALBRECHT

**Hoessli H:** Leucocytosis in Intra-peritoneal Hemorrhage (*Leukocytose bei Intra-peritonealblutungen*) *W. d. Chir. u. Gyn. d. St. d. Ch.* 1914, 21, 11, 630

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb.

A short review is given of the literature on leucocytosis in intra-peritoneal hemorrhage. The author describes four of his own cases of hyperleucocytosis in intra-peritoneal hemorrhage resulting from tubal abortion or ovarian apoplexy. He experimented on rabbits to determine under what conditions hyperleucocytosis is to be expected in hemorrhage. The result showed that the withdrawal of blood alone did not cause an increase in the white blood cells but when the blood taken from an animal was injected into its own abdominal cavity or into another of the same species there was a marked hyperleucocytosis which reached its maximum about six hours after the injection. If the blood was injected subcutaneously into another animal of the same species, the leucocyte curve did not rise but it did if the blood of the same animal was used. The curve reached its maximum height in this case in about 24 hours.

The experiments showed that the leucocyte count cannot be used for the differential diagnosis of intra-abdominal hemorrhage and inflammatory processes but if there are no marked signs of infection hyperleucocytosis may be regarded as a sign of intra-peritoneal hemorrhage.

BRENTANO

**Noetzel:** The Use of Brenner's Principle in the Radical Operation for Inguinal Hernia (*Über Verwendung des Brennerschen Prinzips bei der Radikalsoption der Leistenhernien*) *Deutsche Chir. f. Ch.* 1914, 21, 11, 630

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

In Brenner's typical suture suture of the internal oblique to the cremaster unsafe places remain especially where the cremaster fibers originate from Poupart's ligament and also on the internal inferior angle where the whole cremaster with the spermatic cord passes through the rounded external inguinal ring. In order to make this suture firmer the cremaster is separated at its lower end. The free lower end is sutured into the inner lower angle of the hernial opening. The lateral free edge of the cremaster being fixed with a few sutures to Poupart's ligament the median edge to the internal oblique. The muscle which is thus powerfully developed in large hernias, may thus serve to bridge very broad gaps, and a deep firm layer is formed without traction on the sutured part especially without any tension or separation of fibers on Poupart's ligament.

If the internal oblique is very high and there are

very great gaps the cremaster does not always suffice to cover them. In these cases the insertion of the internal oblique into the rectus is to be cut with a piece of its aponeurosis and drawn downward where it is fastened at the internal angle so that the normal course of the muscle inward and downward is restored. After this the suture to the cremaster as described is carried out. In this way very large gaps can be bridged over and a firm posterior wall established without any tension.

Brenner who originated this method has used it in about 4500 cases and in a large number of cases examined afterward he found only 5 per cent of recurrences. LATZKEVICH

MacLennan A. The Simplified Operation for the Cure of Hernia in Infants. *C. J.* 94  
xliii 449 By Surg. Gynec. & Obst.

The operation which the author performs is said to be so simple that the dangers associated with the radical operation for hernia in infants have vanished. The selection of the case has become less exclusive and the preliminary treatment other than preparation for operation abandoned. The dressing has been reduced almost to the anastomosing point while the after treatment is nil.

In the preparation of a case phimosis if present is corrected one month before the proposed radical operation. In exceptional circumstances the circumcision and the hernia may be operated at the same sitting. No change should be made in the diet nor should the bowels be interfered with. The groin is washed with soap and water followed by alcohol. The hips of the infant are well raised on a sand pillow. This is important as the operation is much facilitated by rendering prominent the parts under view.

The operation is as follows: An incision three quarters of an inch in length is made through the skin so that its center is over the internal ring. Two blunt retractors are inserted into the wound and used to force apart the deeper tissues. By this means the fascia of the external oblique muscle is torn through and by moving the retractors to and fro the bluish more glistening cord and sac become apparent. Where obscenity exists it will more likely be due to false position of the incision or incomplete severance of the umbiliculous tissue. The sac and cord are picked up and drawn out of the wound and the sac is rapidly dissected free from all attachments. The testicles should not be removed unless absolutely necessary. If the sac is a true congenital one it must be divided so as to permit a cut in for the testicle.

The sac should be freed from all adhesions until the junction with the peritoneum has been reached and then treated as in MacLennan's operation. If long it should not all be returned into the abdomen. The requisite amount should be ligatured by puncturing at the desired spot and making a single knot around one half the ends are then carried round the

other half and double-knotted. The upper portion of the sac is cut off. Having threaded the sac a pair of broad straight scissors are passed up the canal between the parietes and the sac to act as a guide for the sac-puckering suture. The needle holding the suture is passed up the canal eye first beyond the internal ring and when the scissors have been withdrawn and the upper angle of the wound pulled upward by a pair of dissecting forceps the needle with the suture is made to perforate the abdominal wall. When this suture is pulled upon the sac retreats up the canal. The suture is fixed to the fascia of the external oblique muscle by a single hitch. This anchors the crumpled up sac at the internal ring where it acts as a sentinel guarding the canal. The sac suture is used for the closure of the wound.

The dressing used is a small roll of gauze which little more than covers the wound. It is retained in position by a strip of rubber adhesive tape two by three inches in size. The after treatment consists in leaving the infant alone and feeding him properly.

The article is accompanied by many illustrations showing in detail the method of operation.

EDWARD L. CORNELL.

## GASTRO-INTESTINAL TRACT

Brown Jr. A. G. Diagnosis of Certain Stomach Cases. *South M. J.* 94 67

By Surg. Gynec. & Obst.

The author shows how certain diseased conditions outside the stomach may express themselves through stomach symptoms. He gives eleven different conditions and illustrates each with a case report.

The intimate and complicated connection between the stomach and other organs through being surrounded and connected with other digestive organs being supplied by a large number of blood vessels being intimately associated with adjacent organs and being connected by nerves with remote parts of the body makes it a prominent agent of expression in disease.

Inasmuch as the motor secretory and sensory action of the stomach is controlled by the pneumogastric and splanchnic nerves and derangements of their conceptions will usually affect these functions of the stomach.

Condition of the stomach which often express themselves through the stomach are:

1. Certain non-bacterial toxic disturbances such as diabetes, gout and nephritis also certain bacterial infections—a the infectious fevers, tuberculosis, acute endocarditis.

Certain irritations of the cerebrum—as tumors, abscesses, hemorrhages, embolism and meningitis.

From the pharynx, larynx and lungs—as in whooping cough, tuberculosis, aneurism and goiter.

The stomach itself—as in gastritis, dilatation, pyloric stenosis, ulcer and cancer.

From the liver and gall bladder—as in biliary catarrh, hepatitis and pancreatic



there may be remissions rather than intermissions. Small amounts of food give relief while increased amounts may provoke pain or distress. Soda relieves when food does not. Pain appearing in one half to one hour after meals is quite diagnostic of gastric lesions. Radiation and diffuseness of pain is considerably more extensive in the gastric than in the duodenal types. Vomiting and hæmatemesis rather more common. Exacerbations more frequent perhaps briefer in duration and more easily provoked by external influences. Location and radiation of pain to the left, lessened motility and spasm suggest peptic ulcer. Acid values are about 20 per cent less gastric than in duodenal types. Reflex gastric disturbances, the result of gall bladder or appendiceal disease, must be suspected and excluded when symptoms are irregular during the period of attack. Coincident disease in these organs and the stomach or duodenum occurs in 20 per cent of all ulcer cases.

Mistaken diagnoses may be made in (1) perforating duodenal ulcers, the painful seizures mistaken for cholelithiasis in 10 per cent of all cases; (2) chronic gall bladder disease without stones, absence of typical colic or icterus, but periods of marked gastric disturbances (pain, flatulency, nausea, sour and bitter regurgitation) are occasionally mistaken for duodenal or gastric ulcer. Röntgen ray findings are of the greatest value in (1) cancerous lesions and hour glass deformities and (2) in gastric ulcer. There are radiologic limitations in duodenal ulcers but proper correlation of clinical laboratory and roentgen ray data enables a safe diagnostic conclusion to be made in most cases. Gastric cancer follows clinically and histopathologically upon ulcer in 6 per cent of all cases, palpable mass is present in 50 per cent. In 48 per cent of all cancers free HCl was present although in reduced amount. Ninety five per cent of all gastric tumors (masses) are malignant. Many extraneous conditions cause gastric disturbances, chief among which are local or central nervous system, syphilis, cardiospasm, Pott disease, pancreatic, chronic nephritis, migratory myocardial insufficiency and hepatic disease.

Kocher T. A Case of Volvulus of the Stomach  
(Ein Fall von Magen- und Duodenal-Perforation). *Dr. h. c. Ztschr. f. Chir.* 9, 4, 1905.  
By Zentralbl. f. d. Chir. Grenzgeb.

Kocher gives a detailed description and history of a case of volvulus of the stomach. The 53 year old patient had suffered from stomach cramps 33 1/2 and 3 1/2 years before each of the last two attacks lasting 3 months. A fourth attack began in the spring of 1903 and still persisted when the patient was admitted to the hospital in November 1903.

A diagnosis was made of ulcer of the stomach and hour glass deformity. The attacks of pain indicated this as well as the chemical examination of the stomach contents. The most striking point was the abdomen began suddenly to become flaccid and an enormous rigid loop of intestine was observed. Two and one half hours after the beginning of

threatening symptoms operation was performed with the diagnosis of volvulus of the sigmoid flexure. On opening the abdomen the enormously distended stomach was seen in a vertical position and to the left also lying vertically the transverse colon. The greater curvature lay to the left the great distention of the stomach was chiefly caused by stretching of the anterior wall. The stomach was twisted 270 degrees. It was untwisted and the findings were as follows: (1) Extreme ptosis to the symphysis; (2) the duodenum ran upward and to the left so that the horizontal part stood almost vertically because of the traction of the stomach on it; (3) there was an hour glass stomach with a small cardiac sac; (4) the loops of small intestine of the right side were displaced to the left over the pedicle of the ovulus.

Because of severe symptoms of insufficiency of the larger sac of the stomach an inferior gastroenterostomy had to be performed five weeks later. On this operation the stretching of the anterior wall of the stomach was explained. As a result of the ulcer which had caused the hour glass stomach (and of congenital predisposition) contraction of the posterior wall had taken place which had brought the greater curvature very close to the smaller curvature. In the second operation the marked hypertrophy of the stomach musculature caused a great deal of difficulty as the mucous membrane could hardly be brought together over it. The defective elasticity of the opening caused renewed symptoms of retention so that nine days later Hennecke Mikulicz plastic operation had to be performed. After that the condition of the patient was satisfactory.

Twenty eight cases of pure volvulus of the stomach are known. 18 of them were operated on and 7 of them showed hour glass stomachs. This condition is an important factor in etiology. Factors causing the causation of the volvulus are overfilling and ptosis of the stomach in this way the duodenum and pylorus mobilized and displaced the stomach becomes very movable and the lesser omentum is stretched. If there is hour glass stomach the already contracted place becomes still narrower the duodenum lesser omentum and the small pouch of the stomach form the pedicle. Another factor is the contraction of the posterior wall of the stomach. The immediate cause of the development of the volvulus is (1) increased peristalsis after antiperistalsis; (2) vomiting; (3) mechanical trauma after motion of the body because of the weight of the distended and prolapsed stomach; (4) trauma of the abdomen and complicated cases. In 18 cases Kocher distinguishes two types: (a) transverse volvulus around the mesenteric axis and (b) volvulus around the long axis of the stomach itself. This being the more unusual form. In diagnosis of volvulus of the stomach is thought of as a must as in all cases of ileus exclude perforative peritonitis. Acute peritonitis must also be considered. A stomach condition is indicated by the

sudden extreme meteorism the appearance of a large circumscribed tympanic tumor in the stomach region and a change in the level of the fluid with a change in position. Among the 28 cases mentioned above with 28 operations there was recovery in 23 cases. Several instructive sketches and photographs are given. *EEG. SCITIZZ.*

De Quersain F: The Diagnosis of Gastric and Duodenal Ulcer. *A. S. J. Phila.* 9 4 ix, 352. By Surg. Gynec. & Obst.

The extent to which surgical operations for gastric ulcers may be successfully performed depends chiefly upon the physician's ability to diagnose. In the last decade progress has been made principally in the realm of extrapyloric gastric ulcer and ulcers of the duodenum: i. e. cases which unless accidental bleeding or acute perforation set in have heretofore been regarded as "gastralgia" and gastric neuroses and treated in various bath and nerve sanatoriums. In spite of the fact that an occasional ulcer had been surgically treated before the introduction of the roentgen rays nevertheless a definite and systematic plan of procedure could only become a genuine possibility after their introduction submitting as it did the benefits of clear vision for uncertain conjectures and theoretical deductions. Progress thus made has manifested itself not only by the ever increasing number of operations for gastric and duodenal ulcers actually performed but also by the great number of published articles.

Other benefits derived by X-ray examinations even surpass the advantages naturally obtained through diagnosis made *vis per os*. The X-ray enables the physician in a manner heretofore impossible to discover the causes of immediate post-operative disturbances and the subsequent ill effects thereof and furthermore to exercise a certain self-criticism formerly too often applied by the internist which though sometimes just was too frequently lacking in any sure foundation.

The author lays great stress on the taking of a series of radiograms thus fixing the most important phases of the process of digestion. Immediately after the patient has taken 400 grams of a sufficiently liquid carbohydrate contrast meal — with out milk — photographs are made — one in the upright position one in the abdominal position and one in the right lateral position. Two and six hours later photographs are taken: the abdominal position — less frequently in the upright position. Photographs are again taken after 24, 48 hours, and so on until the bowels are emptied of the contrast substances. These latter findings are always taken if after 6 hours there is still considerable residue in the stomach and also if a disease of the bowels is in question. The double meal recommended by Haudrich is not used.

In non-stenosed and non-perforating gastric ulcers a localized spasm of the gastric wall is found at the site of the ulcers. This localized spasm differs from the sometimes very intense contraction extending

peristaltic waves, as a rule in that it constricts the stomach only along the greater curvature. The chief reason for this may be that the ulcers are most frequently situated at the lesser curvature. A further diagnostic sign is, that in ulcer the spasm is always found at the same place while at different examinations the contraction of the peristaltic waves is found at different places even if it should concern the greater curvature more than the lesser.

The spasm is not a lasting one. If the stomach is empty it is absent if material is introduced (even air) the spasm reappears but can be dissipated more or less by the use of atropine or papaverine.

When there are no ulcers the spasm may occur at the base of a cicatrix after operation, or as the result of other anatomical anomalies, such as cicatricial bands or the pressure of corsets (seldom). These spasms rarely interfere with the diagnosis.

The spastic condition is not found in all gastric ulcers. The author has seen many cases of pronounced gastric ulcers in which the spasm under ordinary conditions of its appearance was wanting or scarcely to be observed.

The non-stenosed and non-penetrating pyloric ulcer is considered under this heading also. The retention of a considerable residue after six hours is of diagnostic value. The following purely functional disturbances may simulate pyloric ulcer:

1. In purely functional diminished mobility especially in connection with ptosis. In these cases the stomach shows a diminished peristalsis.

2. In pylorospasm excited by an ulcer remote from the pylorus. In penetrating ulcers at the lesser curvature sometimes there is found considerable retardation in the removal of food from the gastric sac on situated beyond the ulcer. This delay is due to a reflex pyloric spasm.

3. In the so-called duodenal motility: i. e. the initially accelerated and subsequently abnormally retarded outflow of the stomach a diminished 2-hour residue and an abnormal 6-hour residue is found whereas in pure pylorospasm the stomach also holds an abnormally large content after two hours. The distinction of both conditions is easily made by an investigation after two hours.

4. In toxic pyloric spasm (in response to nicotine etc.) as a part of the phenomenon of the gastroparesis recently described by Hülzbecht and Lueger in its radiologic point of view.

5. In hyperacidity without ulcer.

In apparent 6-hour residue with preserved or even increased peristalsis gives an essential indication but no real proof of the existence of a pyloric ulcer.

The author describes the non-stenosed penetrating gastric ulcer and gives the three possibilities for its formation:

1. The ulcer may be situated exactly at the lesser curvature — very seldom at the greater — and gradually corrodes through all layers to the point of attachment of the gastrohepatic ligament. Through proliferation and thickening of its connective tissue

the base of the ulcer may be continually made more compact without the necessary addition of other adhesions

2 The ulcer may come to the surface at another place and thus may lead to the formation of fibrin and agglutination with adjacent organs. Into the adhesions thus formed the ulcer burrows deeper and deeper the adhesions, at the same time extending further and further

3 There may be formed an acute and greatly circumscribed perforation sometimes not larger than a pinhead. When this appears in a not overfilled stomach and the quantity of escaping liquid is not large it reacts in the manner described under Group

With ulcers at the lesser curvature and its adjoining regions the particular X-ray feature is the notch. Although it may be a simple matter to discover the notch in typical cases, nevertheless care must be taken not to reach false conclusions. The ulcer may be overlooked easily particularly so if it be situated very near the cardia. When examined the patient must be in an oblique position with the upper part of the trunk lying low and finally in the right lateral position. Doubts may arise from the presence of accidental gastric pouches caused by certain states of contraction especially by the bulging between two waves of contraction—one following close upon another. A marked picture of a notch with a covered-over bubble of gas may be mistaken for the duodenal ampulla or stomach cap. If doubt persists repeated examinations after atropine injection must be made.

A symptom which greatly facilitates the diagnosis of the notch is the existence of a permanent contraction at the greater curvature at a point corresponding to the notch in question or even the picture of a cicatrized hour glass stomach.

When a penetrating ulcer is so far distant from the lesser curvature that it cannot reach the right boundary line of the stomach shadow it is not demonstrable though the roentgen picture in the anteroposterior view. But such an ulcer could be shown if after evacuation of the stomach a shadow of contrast substance should appear at a circumscribed unchangeable place. This is especially true of the ulcers of the posterior gastric wall. For such ulcers the profile view of the stomach should finally be considered.

In stenosing gastric ulcer the roentgen examination has been an aid although the ulcer could be diagnosed without difficulty even prior to the roentgen period. The author classifies this condition as follows:

#### 1. Medugastric stenosis

The following types of bipartition of the gastric shadow may be mentioned

a The purely spastic hour glass stomach which is found in connection with the superficial gastric ulcer and penetrating ulcer

b The mixed hour glass stomach which is a combination of a cicatricial contraction of the stom-

ach with spastic constriction. In these cases the cicatricial contraction is not so pronounced as to substantially interfere with the permeability of the stomach. If such a case should appear however it would be due to the spastic component.

c The cicatricial hour glass stomach in which through further and further contraction of the gastric wall in the region of the ulcer the lumen is finally narrowed to a minimum. A cicatricial hour glass stomach cannot be influenced by atropine

1 With the pyloric ulcer the problem is to recognize the stenosis as an anatomical one not caused by pylorospasm only and later if possible to differentiate the various forms of anatomical stenosis

The occurrence of the following symptoms tends to prove the case to be one of organic stenosis

1 The clinical symptoms—special prominence of pain irregularity of the attacks, and short duration of the signs of retention—are characteristic of spasm but retention existing for a longer time gradually increasing with uniform troubles indicates organic narrowing

2 The time relations of the retention are important. If half of the content meal remains after 6 hours it proves with certainty that there is a functional or an organic impediment. Only a 6 hour residue corresponding nearly to the entire contrast meal which would point toward a probable 24 hour time of expulsion is to be regarded with any degree of sureness as an organic stenosis

3 The action of atropine or papaverine on the spasm

4 The water test. As Von Mering first showed water will pass the pylorus under conditions in which all solid food is held back by a pyloric reflex.

5 The shape of the stomach on the whole remains normal in cases of purely functional stenoses

In the non stenosed duodenal ulcer unequivocal, positive signs of duodenal ulcer are to be had neither in the anamnesis in the clinical findings nor in the roentgen picture. With the symptoms of the periodical secondary pain after taking food often retarded several years the positive diagnosis must be sought by testing accurately the gastric contents and feces for blood since pains of an entirely similar nature are observed without any formation of ulcers. If positive traces of blood are found in both the gastric and intestinal contents the presence of a gastric ulcer would be indicated but when traces of blood are found only in the intestines an ulcer of the duodenum is indicated

Important as is the presence of blood it is, nevertheless not decisive if as many observers remark in actual ulcers blood is often absent or is only present intermittently. When after repeated examinations no blood is found another indication of ulcer is the sensitivity to pressure in the region immediately at the right of the median line

The type of the gastric evacuation in duodenal ulcer is as follows. At first the stomach empties quicker than normally so that after two or three

hours the whole or at least the largest part of its contents is found in the intestine and then descends comparatively quickly. Toward the end emptying is often retarded so that on the other hand a 6 hour residue often remains. Despite this 6 hour residue, the contrast filling in the colon is said to have pushed forward abnormally far as far as the flexura lincalis according to Jonas. The abnormally quick emptying is explained in the sense of a reflex in sufficiency of the pylorus. This duodenal motility is by no means found in all cases of duodenal ulcer. It is however also observed in other very different affections of the duodenal region. It is found according to Bergmann in hyperacidity without ulcer in the early stage of carcinoma of the body of the stomach and finally in those diseases which compete with the duodenal ulcer in differential diagnosis namely in diseases of the pancreas and the gall-bladder. The duodenal motility is therefore but a sign awakening suspicion not a pathognomonic symptom.

A further peculiarity is the existence of a shadow in the bulbous duodenum the stomach cap. This is regarded as in some degree characteristic of duodenal ulcer but its presence is so frequent an occurrence that the author would not lay stress upon it unless it shows a nicely rounded form or one that runs to a point like a hood.

With reference to the diagnosis of duodenal ulcer the author states that when the anamnesis and the clinical condition indicate the probability of an ulcer or prove it directly by hemorrhages, the negative findings in the stomach force the conclusion that the ulcer is very likely situated in the duodenum. The diagnosis of a gastric ulcer is usually a positive one that of the duodenal ulcer a diagnosis *per exclusionem*. It consists on the positive side of a number of symptoms, some of which are of themselves proof and which are important only because of their relation to one another.

The stenosed ulcer may be readily differentiated from the non stenosed type. The chyme normally passes the duodenum so quickly and in such small quantities that the roentgen picture never shows complete filling out or even a somewhat complete outline of this part of the intestine. If it is densely filled with contrast substance so that its course is followed in its entire extent or at least to a certain point there is an obstruction farther down. Concerning the nature of this obstruction the roentgen picture is of no avail. The stenosis may be regarded as an ulcer only when another cause is lacking and when the anamnesis itself indicates duodenal ulcer. These restrictions are also necessary because stenosis is a very rare occurrence with duodenal ulcer.

Closely connected with diagnostics of ulcers are those of adhesions. Abnormal adhesions in the stomach can be anticipated from the following three conditions:

1. An abnormal position of the pylorus the stomach being but normally filled.
2. The too slight displacement of the pylorus

upon examination in different positions of the body.

3. From anomalies of the stomach and otherwise explained.

EDWARD L. CORRELL.

Mayo, W. J. Chronic Ulcers of the Stomach and Duodenum. *Surg. Phila.* 9:418, 1914.  
By Surg. Gynec. & Obs.

During the first period—1893 to 1900—at the St. Mary's Hospital operation for pyloric obstruction was applied only to patients with marked pyloric narrowing. In the chronic cases little differentiation was made between ulcers in the pyloric end of the stomach and those in the duodenum. The results were excellent.

The second period—1900 to 1906—was marked by growth of knowledge the result of surgical observation. During this period it was recognized that obstruction was a terminal condition and a study was commenced with a view to the earlier termination of a malady which exposed the patient to serious dangers and more or less constant disability and distress. There was much discussion of mucous ulcers and a variety of supposed lesions which were not the result of actual observations at the operating table but of an attempt to furnish a pathologic basis for the symptoms complained of by the patient.

During the third period—1906 to 1914—there was great improvement in diagnosis and a better technique was developed. The relation of the clinical symptoms to the lesion was shown in the light of operative experience. Great aid was obtained from the use of the roentgen ray.

Up to December 31, 1913, 1,841 cases of acute and chronic ulcers of the stomach and duodenum had been operated on—457 females and 1,384 males. The early clinical view of a preponderance of females over males was thus shown to be in error. Probably the large number of these supposed ulcers in women were the result of pyloric spasm due to gall stones or intestinal lesions. In 636 of the 1,841 cases the ulcers were located in the stomach in 1,205 in the duodenum. Multiple ulcers occurred only in 4 or 5 per cent of the cases.

The character of ulcers of the duodenum may differ in many respects from ulcers of the stomach. They are usually found in the upper two inches of the duodenum and many times with no crater such as exists in the stomach, but rather a discolored moth eaten patch, in the center of which is a whit or dunple like ulcer but with typical induration in the peritoneal and muscular coats. Incomplete protected perforations are common. Definite healing of the chronic ulcer of the stomach or duodenum is rare temporary subsidence of symptoms is often being mistaken for a cure as is the case in hemorrhoids and appendiceal disease.

Gastrojejunostomy is the most generally useful operation. Ulcers should be excised when the operation can be done without too much risk. Duodenal and gastric ulcers obstruct the pylorus.



yield equally good results following operation. The greater the distance of the gastric ulcer from the pylorus the greater the mortality and the less certain the cure. Ninety eight per cent of duodenal ulcers and ninety five per cent of gastric ulcers will be cured or greatly relieved by operation. The operative mortality of duodenal ulcers is 1.5 per cent of gastric ulcers including acute perforations, acute hæmorrhage resections, etc. 3.8 per cent.

Mathieu A. Studies on the Pathology of Ulcer of the Lesser Curvature (Études sur la pathologie de l'ulcère de la petite courbure). *Gaz. d. hôp.* 1 mai 1914. *Revue* 45. By Zentralbl. f. d. ges. Ch. Grenzgeb.

The vessel and nerves of the stomach open on the lesser curvature. It is the hilum of the stomach. To this fact is due a number of the symptoms of ulcer of the lesser curvature. About a third of the ulcers of the stomach are on the lesser curvature, about half of them on the pylorus. The pure symptom complex of ulcer of the lesser curvature is shown only in cases where it is at a distance from the pylorus. It does not make any difference whether it extends more or less over the anterior or posterior surface of the stomach. That point becomes of importance only when it is a perforating ulcer.

Ulcer of the lesser curvature also gives the general symptoms and complications of other ulcers of the stomach. The only one that is peculiar to it is the tendency to form large tumors (giant ulcer) which often arise comparatively unnoticed because they do not cause stenosis. Characteristic of ulcer of the lesser curvature are the erysipelatous and tuberculous pains which result from the proximity of the ulcer to the solar plexus. The individual attacks are very severe and frequent and generally last from 2 to 3 weeks. In the interval the symptoms may disappear except for ordinary dyspepsia.

The late pains stopped by alkaline or food characteristic of ulcer of the pylorus appear also in ulcer of the lesser curvature but much more rarely than in ulcer of the pylorus. Hyperchlorhydria appears regularly hypersecretion. The regularity returns almost never occurs. The rogen findings are especially important in diagnosis. A constant drawing in of the greater curvature indicates ulcer opposite it. Diverticula of the lesser curvature are signs of perforation of the lesser curvature generally in the pancreas. In the same case the picture of the diverticulum may change extraordinarily. Numerous figures in the text illustrate this.

In cases of saddle shaped ulcer of the lesser curvature in which cicatricial contraction has brought the pyloric end of the stomach near to the cardiac end the stomach looks short and has slightly contracted or is small stomach.

The cases of giant ulcer with pronounced tumor formation are very difficult to diagnose because of their similarity to carcinoma. The differential diagnosis

can often be made in such cases only by exploratory laparotomy.

The diagnosis of the location of an ulcer of the stomach is generally not very difficult as an ulcer of the pylorus has very characteristic symptoms but it is often difficult to distinguish between ulcer of the lesser curvature and ulcer of the duodenum because neither shows signs of stenosis. The differential diagnosis between carcinoma and ulcer may often be made from the fact that the history of the carcinoma does not extend back longer than a year while ulcer has an extremely long course. Carcinoma following ulcer is much rarer than is generally supposed and often cannot be recognized clinically.

The author discusses treatment very briefly. Medical treatment seldom brings recovery but often there is apparent recovery for a considerable length of time. Surgical treatment is indicated as well as gastro-enterostomy may cause complete recovery anatomical as well as functional. Gastro-enterostomy with a large opening as it allows drainage of the stomach frequently causes complete disappearance of all pain and improvement in the general condition. *RIGZ*

Heyrovsky H. Experience with Ulcer of the Lesser Curvature (Erfahrung bei den Ulc. s. an d. kleinen Krümmung). *Verh. d. Gesell. ch. d. utz. h.* Vol. 1. 1914. 94. 30. By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

Heyrovsky discusses the results obtained in 301 cases of operation for ulcer of the stomach. 74 of them for callous ulcer of the lesser curvature and agrees with Hochenegg in the belief that gastro-enterostomy is the best method for treating the majority of ulcers. Extrapyloric ulcer is almost as successfully treated by gastro-enterostomy as ulcer of the pylorus. Resection, which is more dangerous, does not give any better results and is indicated only when there is reason to believe that there is carcinoma and in cases where gastro-enterostomy in connection with suitable diet has not brought about cure. *REINHARDT*

Friedman J. C. and Hamburger W. W. Experimental Chronic Gastric Ulcer. A Second Contribution to the Experimental Pathology of the Stomach. *J. Am. Med. Ass.* 1914. 94. 130. By Surg. Gynec. & Obst.

Acute ulcer of the stomach has been produced in various ways by injecting various bacteria intravenously by feeding bacteria by injecting certain toxins such as diphtheria antitoxin locally by injecting certain irritants into the walls of the stomach mechanically by excising pieces of mucosa, tying off gastric arteries or injecting various emulsions in the gastric vessels. Most of these ulcers however heal rapidly and it was the aim of the authors in their experimental work to cause these ulcers to run a chronic course.

The method used consisted in causing a stenosis

of the pylorus and the formation of an acute ulcer in dogs by injecting silver nitrate into the wall of the stomach. The results of the stenosis were marked peristalsis, hyperacidity and stasis. In most of the cases where necropsy showed dilatation and hypertrophy of the stomach walls, one or more chronic ulcers were present.

The simplest interpretation of these would be as follows. Acute ulcers tend to remain unhealed and exposed to the action of a very active gastric juice for an abnormally long period and possibly the delay in healing is greater if the food and gastric juice are ground against the ulcers with unusual violence from hyperperistalsis. Consequently at least three factors are necessary for the production of chronic ulcers in animals: (1) a local destruction of the mucosa, (2) an active or overactive gastric juice and (3) prolonged or vigorous contact of the two—hyperperistalsis.

The location of a chronic ulcer is usually near the pylorus. Ulcers of the fundus tend to heal probably because peristaltic action is less in this part of the stomach and also there is less acidity or there may be an alkalinuity. In ulcers near the pylorus is subjected to marked peristalsis, often hyperperistalsis and many times an overactive gastric juice.

J. H. SKIERS

von Eiselsberg F. The Choice of the Method of Operation in the Treatment of Gastric and Duodenal Ulcer. *Lancet* Lond. 914. 12. 14. 96. By Sir G. Glynne & Obst.

Gastro-enterostomy has come to be considered the operation most frequently attended with beneficial results in gastric ulcer. But its benefits are not manifest in all cases in persistent ulcer especially its cures are not so numerous.

From an analysis of 334 gastro-enterostomies for this condition several interesting points are brought out viz that ulcers situated at a distance from the pylorus are not so much influenced by gastro-enterostomy as those situated at the pylorus that the most frequent cause of the failure of the operation to cure is the development of a post-operative peptic ulcer of the jejunum that of 41 patients who died a long time after the operation, 13 died of carcinoma and 6 through the progressive continuance of the symptoms of the ulcer.

Peptic ulcer appears to be caused by the continuous passage of acid gastric juice into the duodenum causing the mucous membrane to become eroded. In the less severe forms the symptoms take the form of simple pains and in these cases repair on the part of the organism can bring about a cure. In these cases of spontaneous cure contraction and stricture of the gastro-enterostomy area sometimes occur resulting in a shrinkage of the opening to one third its normal size. In 17 cases of peptic ulcer the chief symptom was the development of a painful induration in the region of the gastro-enterostomy fistula. In 15 instances diagnosis was con-

firmed by subsequent relaparotomy. Either another gastro-enterostomy, jejunostomy or finally an excision of the whole ulcer was done at the ensuing operation. The results show that the growth of a peptic ulcer presents a very serious complication even repeated operations are useless and many have at last succumbed to the peptic ulcer. Inquiry into the cause of this condition shows that a high hydrochloric value of the gastric juice must be mentioned first. In some cases the patient has had vascular disease. Care in the after treatment of cases may go far in the prevention of peptic ulcer but for those cases already declared excision is the best treatment as in the experience of the author neither gastro-enterostomy nor jejunostomy are sufficient in themselves and in many cases both operations combined are of no avail.

Of 53 cases operated by excision 9 died, 41 were cured, one improved and afterwards relapsed and 2 were unrelieved. In a series of 24 cases where jejunostomy alone was performed 12 deaths occurred but this high mortality was due to the fact that the operation was performed in the weakest and worst of all cases, so complicated that nothing else was possible.

von Eiselsberg's experience permits him to lay down the following rules for the choice of method of operation.

For acute perforation the best method is the earliest possible laparotomy with irrigation of the peritoneal cavity and closure of the perforation. Whether a gastro-enterostomy should be done after wards depends on the situation of the ulcer and the general condition of the patient. In hemorrhage, operation is not indicated. If hemorrhage is severe the expectant treatment is the best but if it has stopped for the time being an operation should be performed at once before it recommences.

1. In typical stenosis of the pylorus, gastro-enterostomy is the operation of choice although it is not a complete protection against continuance of the hemorrhage as early half of the deaths following gastro-enterostomy are due to that cause. However, 60 per cent of cases of pyloric stricture are completely cured by this operation.

2. An lateral pyloric exclusion should receive special consideration if the ulcer is still fresh and causing much pain and in cases of duodenal ulcer.

3. High acidity of the gastric juice favoring the development of post-operative peptic ulcers detract much from the value of gastro-enterostomy and exclusion and should be performed only where there are special indications, and not in cases where the symptoms are not severe.

4. In cases of ulcer situated at a distance from the pylorus, transverse resection offers the best results, and it must be done when there is the least suspicion of malignancy. It is also the correct operation where there is high acidity and when the ulcer has invaded neighboring organs. When transverse resection cannot be done Billroth's method No. 2 should be employed. Billroth

method No. 1 is third in order to be considered while partial excision is to be entirely rejected.

Jejunostomy is feasible only in the extreme cases—as when the patient is so weak that he must be fed immediately after operation. In cases of peptic ulcer it is the easiest and most rapid of all operations and it leaves the stomach undisturbed.

The technique of gastro-enterostomy as practiced in von Eiselsberg's clinic is that after the method of Hacker: i. e. retrocolica posterior without any length of bowel between the stomach and jejunum. The suturing is done after the manner of Wolfier. Attention is called to the importance of properly suturing the slit in the mesocolon. In pylorus exclusion the stomach is divided between two clamps by a Paquehn cautery and both proximal and distal ends are closed with a continuous suture while the clamps are on. When a transverse resection is being done it is necessary to supplement the longitudinal incision in the abdominal wall with a transverse one in order to provide sufficient room. In doing a jejunostomy the principle of Witzelschen is followed and one point is especially emphasized, e. g. that the catheter should not be introduced into the intestine at any point lying higher in the abdomen than the umbilicus otherwise it might lead to a kinking of the intestinal loop. E. K. A. Strasberg.

Beck, C. Plastic Operative Methods on the Stomach. *Med. Her. Id.* 1914, xxvii, 5.

By Surg. G. Nec. & Obst.

In 1904 and 1905 the author made some experiments with Alexis Carrel to perform an operation with the intention of making a new route for the pharynx into the stomach. The upper part of this new tube was made from the esophagus which was cut across two to three inches below the jugulum. The lower part of the new tube was gained from a flap along the large curvature of the stomach. These two tubes were sutured and the skin of the chest and healed together. The specimens from the experiment were demonstrated in 1905 before the Chicago Medical Society. Since that time the Roumanian author J. J. has described the same operation in 1909 and it has been known in the literature under his name. Lately the author has reversed the flap of the large curvature in his experiments and instead of turning it upward to reach the esophagus turned it downward to insert it into the jejunum. This makes a new method of gastro-intestinal anastomosis.

Stewart, F. T. A Method of Subtotal Gastrectomy. *J. Surg. Phil.* 1914, 41, 84.

By Surg. Gynec. & Obst.

Stewart describes a method of procedure used by him for doing subtotal gastrectomy without clamps. He does this by using a suture ring necessary to unite the stomach and intestine completed before the resection is opened.

The steps in the procedure are as follows:

1. Ligate gastric artery at upper end of the proposed line of section of stomach.

2. Tie off the gastrohepatic omentum.

3. Ligate the left gastro-epiploic artery one-half inch on each side of proposed line of section of stomach.

4. Tie off gastrohepatic omentum.

5. Make opening in transverse mesocolon and draw the upper segment of the jejunum into the lesser peritoneal cavity. Five guide sutures are inserted in the following locations:

The first (A) is passed through the greater curvature midway between ligatures of the gastro-epiploic artery and the antemesenteric border of the jejunum. The second (B) unites the posterior wall of the stomach about 3 inches above A to the jejunum. Suture C is passed through the posterior wall of the stomach alone about one inch above B. B and C are placed on the line through which the stomach is to be amputated. Sutures corresponding in location to B and C are placed on the anterior wall of the stomach (D and E). A is drawn upward and to the right. B and D are drawn downward and to the left and held together. C and E are treated likewise leaving the upper segment of the jejunum surrounded by stomach and the anterior and posterior walls of the stomach between BD and CE in contact.

A serous suture is introduced from BD to A uniting the stomach to the intestine (lumen). Over this is introduced a through and through catgut suture.

Grasp the greater curvature of stomach one half inch from A, fill the lesser peritoneal cavity with gauze. Excise the antemesenteric portion of the intestine and incise the stomach close to the suture line. Then allow the stomach to straighten out, place clamp on the pyloric side of line of the section. Complete the amputation after approximating the anterior and posterior walls. Remove the pyloric portion of stomach and insert the duodenal stump.

The advantages of the operation are:

1. The excision is less cutting to be done; it is more rapid and less difficult than a posterior gastro-enterostomy.

2. There is less chance of post-operative hemorrhage.

3. There are no clamps in the way.

4. There is less tension on the suture lines and there is less tendency to leak.

Isidore Conn.

Martin, F., and Carroll, H. What Role Does Gastro-Enterostomy Play in the Treatment of Gastric and Duodenal Ulcers? Radiographic Demonstration of the Functioning of the Pylorus following Gastro-Enterostomy. *Id.* 1914, 41, 185.

By Surg. Gynec. & Obst.

The article consists of the report of a very interesting case observations on conditions found and gastro-enterostomy in general together with a discussion of a series of X-ray negatives showing the condition of the pylorus after gastro-enterostomy.

The patient was operated on three times. The

first operation was for gastric ulcer when a posterior anastomosis was done to the lower part of the ileum the second was exploratory and the third was a correction of the results of the first operation.

The patient's past history, family history and habits were negative. Former symptoms were those of pain in the epigastrium an hour after meals relieved by food, vomiting of blood and constipation which followed a year of bad indigestion. The first operation resulted in relief for a short time but the former symptoms returned and were more pronounced. Also at times, practically an entire meal of almost unchanged food was obtained with high enema. There was some retention of stomach contents but no blood and no tumor. At the second operation a mass of adhesions around the anastomosis was found and it was also found that the terminal ileum had been anastomosed to the stomach posteriorly. The patient being in poor condition, the appendix was removed and the abdomen closed. At the third operation the anastomosis was severed, a lateral anastomosis made in the terminal ileum with a Murphy button and the stoma in the stomach invaginated. The immediate recovery was good. Later observations show that, aside from constipation the symptoms all disappeared and have never returned.

In this case at the time of the second operation stomach peristalsis which progressed rhythmically to the pylorus in spite of the large stoma was plainly shown. This explains the question of the nourishment being kept up and the occasional undigested meal appearing in the stools.

The authors then take up the question of the results of gastro-enterostomy in ulcer cases and show that fully 45 per cent of cases have recurred. Barclay is quoted on the etiology of the ulcer showing how from various abnormal conditions in the intestinal canal, a spasm of the stomach ensues. Passage of food causes an abrasion giving rise to a condition that cannot resist the gastric juice and an ulcer is formed which in time perpetuates the spasm.

Gastro-enterostomy influences only pyloric and duodenal ulcers and that in two ways: (1) side-tracking the gastric contents and (2) permitting the reflux of alkaline intestinal juice to neutralize the acid gastric juice. This has no effect on ulcers located in the fundus, lesser curvature or elsewhere. The results of gastro-enterostomy done for stricture of the pylorus due to tumor or overgrowth are the same as those done for pyloric or duodenal ulcer.

The idea that gastro-enterostomy is a drainage operation pure and simple is shown to be a fallacy as long as the pylorus is patent. The hydrostatic conditions in the abdominal cavity absolutely prevent this. As soon as the pyloric spasm is removed by the healing of the ulcer the gastric contents follow their former normal course and the old ulcer site is again open to trauma.

Martin therefore concludes that (1) gastro-enterostomies are useful only in pyloric and duodenal

ulcers accompanied by pyloric spasm (2) are of no value in ulcers situated in other places in the stomach (3) when the pyloric spasm relaxes the artificial stoma closes and there is present a tendency towards reformation of the ulcer.

The high percentage of recurrences, the serious and ever present complications and the fact that 50 per cent of cancer cases give previous ulcer histories, Martin believes warrants the excision of the ulcer and also indicates the operation of pylorotomy which he strongly advocates. He does not believe in the operations of pyloric occlusion nor the method of von Eiselsberg.

The article concludes with a short discussion by Carroll of a series of six X-ray studies showing that, given a patent pylorus, the gastric contents will flow through the natural channels rather than the artificial.

In every series a bismuth shadow is seen in the duodenum the amount depending upon whether the picture was an early or a late one.

PHILLIPS M. CHASE

Baetjer F. H., and Friedenwald J. On the Diagnosis of Incomplete Forms of Pyloric Stenosis by Means of the X-Ray. *Boston M & S J* 94: 1121, 1911. By Surg. Gyroc & Olsen.

The authors point out the difficulty of diagnosis in early pyloric stenosis and show the value of the X-ray negative in such conditions.

Pyloric stenosis can be divided into two classes: (1) those cases with pronounced symptoms and (2) those in which the symptoms of retention and stagnation are only slight although both classes are often only stages of the disease in the same case.

The diagnosis of the first class from symptoms and test meals is usually easy while those of the second class are often overlooked or an incorrect diagnosis made.

In the latter class peristalsis is usually absent, vomiting irregular and devoid of the usual features of gastric stasis, and pain not marked. The pain when present appears two or three hours after meals and is temporarily relieved by food or alkalis. Another marked symptom is the presence of gastric secretion in the fasting stomach on repeated examinations and this symptom is always indicative of pyloric stenosis.

The motility of the normal stomach varies greatly and the best authorities have agreed that the normal rate should be between three and six hours.

The authors advise a bismuth meal of one and half ounces of bismuth subcarbonate in an ordinary tumbler of water with enough scalding water to make an emulsion as the best for X-ray work.

When there are obstructions within the stomach, caused either by malignancy around the pylorus, or ulcer with cicatrix or idiopathic pyloric thickening in the early stages, the X-ray shows active contractions but a slow elimination of the contents and frequently a slight bulging in the prepyloric

region on the greater curvature caused by the food being forced into this region faster than the impaired pylorus can handle it. The size of this bulging depends on the duration of the condition. Sometimes it is only slight but more often the pylorus is shown on top of the stomach pointing towards the splenic region.

When there are obstructions from without the stomach caused by a mass or growth pressing upon the pylorus or duodenum or adhesions around this area the first condition is soon cleared up by palpation or by the  $\lambda$  ray plate. The second is the more common type the most frequent cause of which is adhesions around the appendix and cæcum involving the omentum which in turn draws the greater curvature of the stomach down preventing a normal emptying of the contents. The  $\lambda$  ray shows the prepyloric region drawn down to the appendix region.

Adhesions from the gall bladder region so bind down the pylorus and duodenum that the stomach contents are very slowly forced through the narrowed lumen resulting in a gradual stomach dilatation.

Retention from muscular relaxation is caused by sluggish contractions so that the mere weight of the food dilates the stomach. The point of greatest prolapse is the center of the fundus. It is difficult to distinguish this condition from that due to pyloric stenosis of long standing but a comparison of the two  $\lambda$  ray plates will assist greatly in the differentiation.

In conclusion the authors state that the  $\lambda$  ray is a very valuable aid in partial pyloric stenosis in those cases in which the trouble is from within is especially valuable in cases where the obstruction is from without and emphasize the importance of  $\lambda$  ray examinations always being studied in conjunction with the clinical signs.

PHILLIPS M CRASE

Cole L G Relation of Lesion of the Small Intestine to Disorders of the Stomach and Cap as Observed Röntgenologically. *Am J M Sc* 9 4 Oct 1919 By Surg. Gynec. & Obst.

Cole undertakes to prove that *iliac stasis* and particularly *iliac dilatation* are directly related to and responsible for certain spasms and even organic lesions of the pylorus pyloric sphincter and cap. One is at once reminded of Lane and in his paper the author refers to the theories of Lane and the roentgenologic work of Jorda.

Cole has subjected 300 cases to a complete examination of the digestive tract and describes his technique which consists in the administration of bismuth or barium in butter-milk in conjunction with a Riegel meal of meat potatoes and bread, with roentgenography ten hours later and at subsequent intervals until the colon is evacuated. This is supplemented by an examination of the gall bladder for possible calculus and of the colon after an opaque dysma. He repeats his previous contention that testing gastric motor efficiency simply by adminis-

tering bismuth in fluid or cereal is a fallacy. An even more fertile source of error he thinks is dating the period of *iliac retention* from the time of ingestion and holds that time required for evacuation of the stomach should be deducted for accuracy.

In spasm of the pars pylorica that portion of the gastric lumen is disproportionately reduced in size and corrugated. Spasm of the sphincter may be inferred if the sphincteric lumen and cap is not visualized if bismuth has been seen passing freely from the stomach previously and subsequently. In spasm of the cap the bulb shows the appearance of having been twisted or wrung empty of its contents. Long-continued spasm may result in permanent changes causing contraction of the muscular coat of the pars pylorica or distortion of the cap similar to the changes resulting from post pyloric ulcer.

Retention in the stomach and cap may be due to inhibition of duodenal peristalsis and this inhibition may be the result of *iliac dilatation*. Roentgenologic evidence indicates that *iliac stasis* or rather dilatation may be caused by (1) Incomplete evacuation or fecal impaction in the cæcum or ascending colon (2) membranes and webs involving the colon and terminal cæcum (sic) (3) kinks of the terminal ileum (4) insufficiency of the ileocecal valve and (5) chronic appendicitis. These are discussed *seriatim*.

ALBERT MILLER.

Gray F D: Some Observations on the Technique of Intestinal Anastomosis, with Special Reference to a Modified Maunsel Method. *T Am Asst Obst & Gynec Buff* 10 1914, Sept.

By Surg. Gynec. & Obst.

The author after briefly referring to the history of intestinal anastomosis in which he shows that modern methods of anastomosis were vaguely forecasted by efforts of operators in the middle ages gives a skeleton outline of the principal anastomotic technique practiced within the past forty years—the modern period.

He then states what in his opinion are the essential requirements of a sound and generally applicable method of anastomosis: viz a secure water-tight joint to be made as rapidly as safety will permit and adaptable to adverse as well as favorable surroundings; also to the various varieties of anastomosis—end to end end-to-side and lateral—providing hemostasis in the cut intestinal edges and leaving as little narrowing of the lumen by flange formation as possible.

Based on these requirements all mechanical aids or devices are ruled out and the all suture technique of some sort advised.

A discussion of the merits of anastomosis by a double or single through and through row of sutures follows, with conclusions in favor of the single row.

Connell's method is then compared with that of Maunsel's, which has practically become obsolete but which the author believes could be profitably revived with the substitution of a continuous

locking or buttonhole suture of J agnstecher thread to replace the interrupted sutures advised by Maunsell and still described in textbooks

The interrupted sutures are open to several objections which are obviated by the use of the continuous locking stitch which as applied to the invagination method of Maunsell has in eight recent cases appeared to the author to furnish a quite ideal method of anastomosis

Reder F. Remarks on the Surgery of the Ileocolic Coil. *Surg. Gynec. & Obst.* 1914, 1: 66.  
By Surg. Gynec. & Obst.

Reder maintains that the early diagnosis of an intestinal lesion especially those of a cancerous or tuberculous lesion is essential to the anticipation of a successful surgical invasion. Too often such lesions are interpreted as chronic appendicitis colitis or intestinal indigestion.

Such a diagnostic error often loses for the surgeon good opportunities negatively influencing the result. From the author's experience he believes every resection of the ileocolic coil should receive the most guarded consideration no matter how favorable the condition of the patient. Every element of danger should be eliminated and every factor of safety should be embodied in the technique.

In his last two ileocolic resections Reder has substituted a modified artificial anus with a happy result. His technique is as follows:

The diaphragm of the ileum should be such as to give the bowel the necessary latitude to be brought without tension in contact with the colon. Near the hepatic flexure at least six inches of ileum should be sacrificed. The end of the colon is closed in the accepted manner. The end of the ileum is closed temporarily with a basting stitch so as to avoid pulling any of its defective contents while the operation is in progress.

A lateral incision is made with an incision not less than three inches made with the coil. The end of the resected ileum is secured to the abdominal wall far laterally as possible so that a future displacement of the ileum is impossible.

With the patient in the prone position the free end of the ileum is drawn out of the abdominal cavity and sutured to the parietal peritoneum with two or three sutures. The most convenient way from a surgical point of view might be liable to get caught at the point of fixation. The abdominal wound is closed. If a more advanced antiseptic implantation of the ileal end can be made through a small secondary abdominal incision this should be done and the primary incision closed.

The basting stitch with which the ileum is removed and a Paul's tube inserted to drain off fecal matter and flatus. The opening of the small intestine is of service for irrigation of the small bowel when necessary. The large bowel can be irrigated through a modified Paul's tube.

It requires about five to eight weeks for the ileal opening to close. No operative measures of any risk are necessary to aid in its obliteration.

Case J. T. Roentgen Examination of the Appendix. *Am. J. Surg.* 1914, 9: 4, c 161. By Surg. Gynec. & Obst.

Case believes that the rarity of roentgenograms of the appendix has been because of the frequency with which the bismuth examination has been made in the erect rather than the reclining position. With the patient reclining on his back the tube underneath and the screen above and the caecum held aside with the gloved hand or a wood instrument. Case has shown the appendix in more than 300 cases. In one series of 827 bismuth meal examinations, the appendix had been removed from 64 patients. Of the remaining 63 the appendix was demonstrated in 23, just one-third apparently a high percentage until it is recalled that patients were examined because of gastro-intestinal symptoms. In a majority constipation was prominent. When the shadow can be demonstrated it is possible to study the size and length of the lumen, presence or absence of constrictions or kinks, adhesions, drainage (emptying time), relation of the visible appendix shadow to the umbilicus, pain point and the position, proceal or retrocecal, etc.

At least one examination should be made sufficiently long after the bismuth meal that the ileum may be empty as a shadow remaining in the terminal ileum may be mistaken for the appendix. It is to be presumed that when the appendix is itself promptly of the bismuth contents the fact of the entry may be of little consequence but when the appendix remains visible for more than a day or two it is, in proportion to its poor drainage, dangerous. In connection with the suggestion that perhaps, in the cases the presence of the bismuth might be a menace to health an inquiry was made as to the fatality of the repeated doses of bismuth. In the examination of five who were being given bismuth in fifteen grain doses for acute gastro-intestinal disease bismuth was found in the appendix in every case. In one case it was found on the nineteenth day after the last dose of bismuth. The conclusion seems warranted that the danger of bismuth entering the appendix and by remaining there causing acute appendicitis is of greater when given for X-ray examination than when given therapeutically. Even when the appendix is not shown the X-ray gives definite information as to whether or not a tender area coincides with the shadow of the lower inner border of the caecum. D. R. BOWEN

Gunn J. A. and Whitefooke, R. H. A. Observations on the Movements of the Isolated Human Vermiform Appendix. *Br. J. Surg.* 1914, 9: 1.  
By Surg. Gynec. & Obst.

It is a well known fact that several of the organs of mammals may be removed and kept for limited time in unoxegenated Lock solution without showing any movements whatever. However, if the solution is raised to the body temperature and oxygenated the organs will show rhythmic contractions. Working along the same line the authors

thors studied the movement of the isolated human vermiform appendix.

The method used was to keep the appendix in Locke's solution until the experiment was to take place. The appendix was then suspended in a bath of Locke's solution at a temperature of 37 to 38°C with oxygen bubbling through it. The appendix was suspended between two hooks, the lower of which was fixed while the upper attached by a thread to a lever recorded the contractions of the longitudinal muscle of the appendix.

It was found that the appendix normally shows rhythmic contractions very similar to the contractions of the enervated colon of the dog that is regular strong contractions lasting from 10 to 40 seconds each. Superimposed on these large contractions may be seen smaller ones not very regular but having an individual duration of 2 to 4 seconds.

Examination of the rabbit's appendix in Locke's solution shows a curve of contractions very similar to that obtained from the human appendix. Examination of the movements of the rabbit's appendix *in situ* gives a similar result to that in Locke's solution. It seems fair to assume therefore that the movements of the human appendix which are observed in Locke's solution are those which occur normally *in situ*.

An attempt was made to discover the innervation of the appendix. As is well known the large intestine has a double nerve supply: (1) splanchnic or sympathetic nerves and (2) the pelvic visceral or parasympathetic nerves. These two groups have antagonistic functions, the former by diminishing the tone and abolishing the rhythmic contractions, the latter by increasing the tone and augmenting the rhythmic movements. By the addition of adrenaline to the Locke's solution the contractions ceased and the appendix relaxed. By the addition of pilocarpine to the solution the tone was increased and also the contractions. From this experiment it may be assumed that the innervation of the appendix is similar to that of the large intestine.

J. H. SALES

Mort S. Gangrenous Appendix with Coprolith Abscess Septic Peritonitis, Intestinal Obstruction Rupture of Intestine and Fistula  
*G. J. J. 94, xxxv 85*

B. Surg. Gynec. & Obst.

The author reports an interesting case of appendixitis which was complicated by testicular obstruction and peritonitis. The patient, a boy of 15, was sick three days before operation. When the abdomen was opened pus poured out. The appendix was found to be gangrenous, the whole organ being swollen; the distal portion was distended by a coprolith the size of a small date seed. A portion of the omentum was removed because of gangrene. The wound was disinfected, packed and drained.

The patient progressed nicely for ten days when complications set in. The temperature rose to 103 and the pulse reached 14. Two days later

there were signs of peritonitis, the temperature dropping to 97° and the pulse rising to 140. At operation a median incision was made and pus flowed from the wound. The pus was located in the rectal fascia. On opening the peritoneum a small amount of ascitic fluid escaped. The intestines were inflamed and matted and between the coils there were sacculated collections of pus. Most of the coils were distended but on the right side there was a collapsed and flaccid small intestine, one loop of which had fallen into the true pelvis. A band of omentum was found passing round and tightly gripping the loop of gut. When the omentum was removed a rupture two inches in length was found in the intestine. The opening was closed by continuous Lembert silk suture and the peritoneal cavity was well packed with dry iodoform gauze.

For four days the patient did not improve. The intestine was opened again and the contents poured abundantly from the upper part of the wound. The patient then began to improve. The fistula closed in twenty-two days and a month later he was discharged cured.

EDWARD L. CORNELL

Bainbridge W. S. Operative Findings in Twelve Cases of Chronic Intestinal Stasis  
*Am. J. Obst. & Gynec. 1910, 65, 104*

By Surg. Gynec. & Obst.

The important part of the output of grist from the mill of controversy and discussion which had been built up around the theories of Sir W. Arbuthnot Lane concerning chronic intestinal stasis was the establishment of the facts of the existence of the adventitious intra-abdominal structures, evolutionary bands and of the condition of stasis which they cause. Around these two facts has developed some very creditable work by different investigators but there still remain certain questions to be settled.

It is important to study the human digestive canal as a great drainage system and to consider this system as a whole, remembering that defects in one or more parts are apt to derange the entire plant.

The author presented a series of cases as illustrations of the following points:

The possibility of making the diagnosis of chronic intestinal stasis by clinical examination alone without the aid of X-ray or fluoroscopic study.

The verification of the diagnosis by the discovery at operation of the bands and the kinks.

The discovery in certain instances of conditions which may be interpreted as corroborative evidence of the correctness of Lane's theory regarding the possible remote effects of chronic intestinal stasis.

Kohn H. Multiple Diverticula of the Large Intestine (Über die multiplen Divertikel des Dickdarms). *Berlin W. J. 1910, 94, 1031*

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The author first discusses the scanty historical data available in regard to this interesting and little known disease and then takes up the clinical picture

The clinical significance of diverticulum of the large intestine is, in itself slight, but very severe complications may result from it such as stasis of feces, decomposition of the intestinal contents in the diverticulum, suppuration and perforation generally not into the abdominal cavity but into the mesogastrium and the sigmoid flexure. In other cases ulcers are formed in the intestinal wall that make the intestine stiff and hard and simulate malignant tumor.

Three cases are described in men from 36 to 63 years of age. Twice a diagnosis of appendicitis was made and operation performed followed immediately by death in the other case. Last my was performed because of an inoperable carcinoma of the sigmoid flexure was suspected. The patient died after 6 years. In all three cases autopsy showed a diverticulum of the large intestine which in the first case was limited to the rectum and sigmoid in the second case involved the whole large intestine and in the last case had transformed into a thick hard tumor.

He discusses the diagnosis based on these three cases and points out that in every useful case of intestinal disease this condition should be thought of. The fact that the disease is found almost exclusively in men is due he thinks to the fact that the abdominal pressure of old women is slight while in men in connection with peristalsis and the development of gas the pressure either distends the vessels and the openings of the vessels or exercises differential pressure on the ingesta and thus leads to a distention of the intestine in the intestinal walls.

NOV. 15

Mayo, W. J. Resection of the First Portion of the Large Intestine and the Resulting Effect on Its Function. *J. Am. Med. Assn.* 1914, 445.

By Surg. J. J. Lane & G. B. Lane.

Variation in the position of abdominal sac within limits should not be considered abnormal. The large intestine with its short hord and changing function has less fixed character than the more primitive small intestine. The proximal half of the large intestine has an important assimilative function being closely related embryologically and functionally to the small intestine. The function of the distal half of the large intestine is mainly storage. It is probable that the past too much importance has been attributed to purely intestinal changes in the position and its chemical changes in the large intestine thus giving more or less normal bacteria, lumps, and adhesions a fictitious rôle in the supposed production of symptoms.

By the caecum is situated at the head of the colon, the caecocolon the caecum itself being only from 4 to 3 inches in length. It has most important function in assimilation. Reasoning from analogy probably the functional activity of the proximal half of the large intestine concerns vegetable material and is large in the herbivora and small in the carnivora. Man is rapidly increasing his intake of flesh. If unassimilated it undergoes decomposition and these

products, thrown into the large intestine may be absorbed with deleterious effects, disturbing the metabolic balance.

Lane and others object to the term auto-intoxication and propose to substitute subintoxication. It has not been shown that all of the toxic products are due to intoxication apparently some are essentially chemical. Glandular secretion of the caecocolon is important in metabolism. It is possible that hyper and hypo activity of these glands may have effects which can be compared to like disturbances in the thyroid, adrenals, and other glands of internal secretion. Food intake in the stomach causes emptying of the lower ileum in the caecocolon. It is possible that some constipations and toxic conditions have their origin in the ileum rather than in the colon.

Commenting on the physiologic basis of Lane's pioneer work, the author states that ileocolostomy is sometimes unsatisfactory on account of the dilg of the blind end due to reversed peristalsis. Complete colectomy is a very useful operation on account of removal of the entire omentum which subsequently may give rise to extensive troublesome intestinal adhesions.

Removal of ten inches of the ileum caecum ascending colon hepatic flexure and a portion of the transverse colon is a satisfactory operation. Cases are rare in which such an operation is indicated. The entire subject is in the experimental stage and haste must be made slowly.

Landennols, G. Total Colectomy and Subtotal Colectomy; Operative Technique. (*Colectomie totale et colectomie sous-totale technique opératoire*) *J. d. M.* 1914, 20, 791.

By Surg. Guyot & Obst.

The author discusses the technique of each kind of typical colectomy but does not enter into a discussion of indication. He thinks the method used by Dr. Arbuthnot Lane can be improved upon in several particulars. These improvements are: (1) separation of the great omentum from the transverse colon and mesocolon; (2) conservation of the great omentum; (3) use of the incision rather than the horizontal position while the testis is being sectioned and the anastomosis made; (4) the use of subtotal colectomy with anastomosis between the caecum and sigmoid instead of a total colectomy. This does away with the pain which persists for so long after total colectomy.

There are distinct advantages in dissecting the great omentum. In the first place it isolates the transverse mesocolon a thin layer of cellular tissue on which are clearly outlined the right and left colic arteries, forming Riordan's arch. The arteries having been followed up to their origin only three ligatures of No. 0 catgut are required to secure absolute hemostasis of the ascending, transverse and descending colon. With the old method a large number of ligatures were blindly placed close together straggling irregular areas of tissue. These areas remain



ed painful for a long time after the operation even when covered with peritoneum. Moreover when the mesocolon is sectioned near its origin it leaves only a small incision situated deep down so that no peritonization is necessary. Ligation *en masse* of the mesocolon and great omentum offered another disadvantage. It brought the greater curvature of the stomach into juxtaposition with the transverse mesocolon, the right and left colic arteries and the duodenojejunal angle. The tension caused by the ligatures and the cicatricial retraction following the operation aggravated this condition and doubtless caused the gastric troubles that so frequently followed colectomy. The dissection of the omentum from the colon also facilitates the liberation of the flexures of the colon. The flexures are each fixed, the left one higher and more firmly than the right, by a thin broad fibrous ligament extending from the lateral parietal peritoneum to the upper edge and anterior surface of the colon. They are exactly in a line prolonged from the great omentum. When the latter is dissected and raised, nothing is simpler than to slip the index finger between the mesocolon and these suspensory ligaments — which are fibrous and nonvascular — cut them and lower the flexures. If the omentum is not dissected the ligaments cannot be cut without risking the vessels of the mesocolon underneath. Lane himself once had severe hemorrhage which could be explained only in this way.

There is no doubt that the conservation of the omentum is desirable. Its value in abdominal strictures and as a defense for the peritoneum indicate this. But even if it has to be sacrificed it should be dissected previously for the reasons just given. None of the patients have shown signs of inflammation of the omentum and in one patient who had to be operated on later for another purpose the omentum was found to be in good condition and sufficiently movable.

With a little practice dissection is possible even if there are adhesions and pericolicitis if the mentum is not absolutely contracted and cicatricial. The most that is risked is the tearing of some fragments of the posterior fold of the omentum adherent to the mesocolon and as all the important vessels run through the double anterior fold and as this alone is fixed to the greater curvature of the stomach that fact is not of much importance. The author does not practice colectomy for simple chronic intestinal stasis if the colon is perfectly normal. He believes that such colons may be restored to normal function by medical treatment and possibly by a palliative operation. He performs colectomy only when chronic colitis has caused degeneration of the walls of the colon and such extensive adhesions that their destruction would be difficult and almost certainly followed by recurrence. This shows that the separation of the omentum and colon can be practiced in patients who have adhesions, pericolicitis and even epiploitis.

Lane operates in the horizontal position but the author prefers the inclined position for the purpose

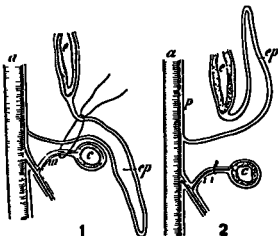


Fig. (Lardennos) Ordinary ligation of the transverse mesocolon with the great omentum. Bad technique.  
Fig. (Lardennos) Proper ligation of the transverse mesocolon with the omentum dissected off and lifted up. Good technique.

of getting the mass of the small intestines out of the way and securing more perfect isolation of the field of operation.

Subtotal colectomy has distinct advantages over total colectomy. In the latter in addition to the pain from the ligation *en masse* and the traction on the stomach by the cicatricial contraction of the mesocolon there is apt to be excessive diarrhea and reflux of gas into the small intestine. The valve of Bauhin which is necessary to perfect functioning of the small intestine is suppressed. This is one of the reasons why the author is inclined to question the value of ileosigmoidostomy — Lane's short circuit. Therefore he devised the operation of subtotal colectomy with the formation of an end-to-end or end-to-side anastomosis of the cecum and sigmoid after resection of the base of the cecum.

The fact that the cecum is prolapsed, distended and too movable does not necessarily indicate that it should be sacrificed. Instead of being the cause of the trouble as is so often assumed it is more apt to be the victim of colitis of the adjacent segments dilated because of their defective function and degenerated from progressive distension. After subtotal colectomy and typhlosigmoid anastomosis the liquid contents of the cecum are easily evacuated.

A cecum well drained into the sigmoid can cause no trouble and there are advantages in retaining it unless there are marked lesions of its walls. The general direction of the small intestine is maintained and the last few centimeters of the ileum preserved where absorption is intense and lymphoid organs abundant. The normal implantation of the small intestine into the large is preserved likewise the valve of Bauhin which regulates the

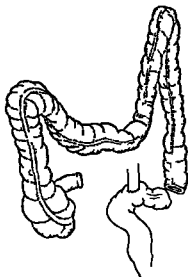


Fig 3 (Lardennou) Total colectomy ileosigmoid implantation

function of the small intestine and offers a barrier to reflux. Moreover in retaining the cecum we preserve the second stomach in which the greater part of the starch and cellulose is digested and which also furnishes a safety chamber in case of sudden reflux from the sigmoid. Lane's partisans object that in preserving the last few centimeters of the ileum the risk of leaving a Lane's kink is taken. In the first place these bands are extremely rare and in the second unless they are very small they cannot interfere greatly with the evacuation of the small intestine if the cecum is well drained. At any rate if the surgeon finds such bands he may destroy them not by cutting them but by separating them at their insertion into the intestine which will prevent recurrence. The liberation of the cecum which is necessary for its anastomosis with the sigmoid would free the intestinal insertion of a Lane's kink if there should be one. It has been held that the cecum should be excised because it is the place in the intestine where bacteria are the most prevalent but it would seem that a cecum regularly evacuated would be disinfected moreover examination after total colectomy has shown that the bacterial flora normally inhabiting the cecum take up their abode in the terminal segment of the small intestine. It seems desirable therefore to preserve the cecum and the adjacent portion of the ascending colon unless there are distinct contraindications.

The operative technique as described by Lardennou in total colectomy chloroform is to be preferred to ether anesthesia because it is more profound. The patient is placed in the horizontal position, the operator on the right side with his two assistants opposite him. The median incision is 20

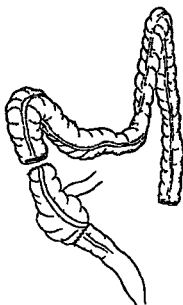


Fig 4 (Lardennou) Subtotal colectomy End-typhlosigmoid anastomosis after resection of the base of the cecum.

to 22 cm long, one third of it being above the umbilicus two thirds below. The abdominal cavity is inspected carefully and a Ricard retractor with a triple valve inserted. The great omentum and colon are brought outside the abdominal cavity the cavity being protected with compresses. The omentum is lifted. The line of junction of the omentum and colon is marked by fine folds in the peritoneum. The assistant pulls the omentum and colon in opposite directions keeping the omentum spread out on his open right hand while his left hand twists the colon from above downward. The operator taking the omentum in his left hand passes a bistoury over the fine folds along the line of junction from the left to the right end of the transverse colon. The space is thus opened up and the opening is enlarged by the finger the assistant holding the parts aside as they are separated. The dissection commences on the colon and is continued on the mesocolon becoming easier as the attachment of the mesocolon to the posterior wall is approached. Soon the omentum is laid aside at the upper angle of the wound and the whole superior surface of the mesocolon is exposed to view. The left index finger following up the mesocolon comes to the suspensory ligament of the splenic flexure which being non-vascular can be cut by the bistoury without any danger to the mesocolon or its vessels. The splenic flexure is thus detached and lowered. The dissection of the parietal peritoneum is then followed up toward the mediastinum as far as desired.

The right flexure is freed in the same manner as

the left. There may be some adhesions around the gall bladder but they are easily broken up. The transverse colon with its mesocolon is lifted up and the omentum is replaced in the abdominal cavity. Then the arteries are seen outlined on the thin mesocolon. A ligature of No. 0 catgut is placed on the right colic vessels, then on the accessory right colic vessels, and a third on the left colic vessels at the place where the pelvic colon is to be sectioned. Hemorrhage may be prevented by placing small Kocher's forceps on the peripheral ends of the ligated vessels and cutting the mesocolon between Riordan's arch and the pancreatic insertion of the mesocolon. The transverse ascending and descending colic freed from their mesocolon but remaining fixed at the extremities by their continuity with the cæcum and the sigmoid are lifted up thus forming a great arch. The patient is then placed in the inclined position which takes the mass of small intestines out of the way. The place for section of the colon is selected. A small ligature is all that is necessary for hemostasis of the mesocolon. The intestine is crushed with a Doyen's forceps and a ligature of No. 1 silk is placed here a strong forceps — not a clamp under which the intestine lies — being placed just above. The colon is then cut with the thermocautery between the ligature on the lower end and the forceps on the upper. The upper segment is placed outside the field of operation and the lower end is closed with the usual precautions. The cæcum and the termination of the small intestine are then freed from any adhesions that may exist. Hemostasis is accomplished by ligation of the ileocolic artery. The incision of the ascending mesocolon is prolonged in the mesentery to the point chosen for section of the ileum. A strong forceps is placed on the distal end of the ileum a smaller forceps firm but not heavy enough to produce trauma on the proximal end. After the intestinal contents are pushed back, a clamp is placed for safety a few centimeters farther up. Section is made with the thermocautery and the distal end of the ileum is thrown out of the field of operation. The removal of the colon is completed.

An end-to-side anastomosis is made between the ileum and sigmoid according to the ordinary rules. The dissection of the ileocolic mesentery has left a flap of mesentery which it is well to suture to the posterior peritoneum with a few fine catgut sutures to prevent the formation of a dead space as well as to fix the end of the ileum. Lane drains the anastomosis and after the operation is completed he introduces a rubber tube the size of the little finger through the anus into the rectum. It is passed up through the anastomosis to the terminal portion of the small intestine and projects about 15 cm. outside the anus. Lane long experience has doubtless shown that it is better to drain directly than to leave the patient's subject to an intermittent painful diarrhoea. The author also thinks that this tube has the advantage of preventing movements of the small intestine over the anastomosis which constrict

the end of the ileum and that it thus prevents the painful spasms that he has observed for several weeks after the operation. Perhaps this drainage also prevents distention above the anastomosis and thus makes it more secure. The tube is evacuated spontaneously by the patient. The omentum is replaced over the intestines but it is not advisable to pull it downward. In some cases he has attached it loosely to the anterior wall of the abdomen to prevent its pulling on the greater curvature of the stomach. The wound is closed without drainage.

The first stages of the operation are the same as for total colectomy. Section should be performed first on the end that is to be closed and last on the end where the anastomosis is to be made. Section may be made with the bistoury but the author prefers the thermocautery. The place chosen for section of the sigmoid is variable depending on whether an end-to-end or an end-to-side anastomosis is to be made. The caliber of the sigmoid determines the question if it is large the end-to-end anastomosis is ideal. Flaccid, atonic pelvic colons are eminently adapted to end-to-end anastomosis. In one case where marked spasm was recognized clinically the spasm was overcome by small irrigations of bella donna given two days before the operation and on the morning of the operation. The appendix is generally removed before the base of the cæcum is resected. A clamp is placed on the cæcum and another on the sigmoid a few centimeters below the section in order to prevent reflux. The base of the cæcum is resected and then the anastomosis is performed according to the usual rules. A tube may be used as in Lane's operation. The end-to-side anastomosis is the same except that the cæcum is implanted into the side of the sigmoid. A Goss

Bookman M. R. Congenital Malformations of the Rectum and Anus 131 ff. 94 c. 415  
By Surg. Gynec. & Obst.

The anus is first noticed in the early weeks of the embryo as a dimple in the epiblast and is known as the proctodeum. The lowermost portion of the hind gut which eventually forms the rectum and sigmoid is separated from the proctodeum by a thin septum which normally disappears about the fourth week of intra-uterine life leaving those structures in continuity. At the time of fusion of the anal depression with the hind gut it has opened into it anteriorly the urachus and posteriorly the intestine. This is called the cloaca. During the second month of development this cloaca is divided transversely by a septum which later forms the perineal body. Persistence of the fetal openings result in the various congenital fistulae while the non-disappearance of the septum between the proctodeum and the hind gut constitutes the salient feature of imperforate anus and rectum.

The simplest forms of rectal malformation are handled comparatively easily but with the increasing distance between the proctodeum and the lowest portion of the primitive rectum greater difficulties

are encountered. In cases where a septum is found the use of an exploring needle greatly facilitates matters and when gas or meconium escapes, it serves as a guide for further dissection. Imperforate anus are best treated by a vertical incision over the perineum and gradual dissection upward aided by the exploring needle. Should the bowel be found it should be brought down and sutured to the skin. If it is not to be reached from below it is better to do a colostomy and attempt to readjust matters later. The establishment of an artificial anus however usually predicates disaster consequently every justifiable attempt should be made to effect a junction of the rectum with the anus. After operation the rectum must be kept dilated with the finger or with suitable bougies.

Rectovaginal and recto-uterine fistulae may be repaired when the child is older but rectovesical and recto-ureteral fistulae should be repaired as soon as conditions permit for when colon bacilli appear in the stools, ascending infections of the urinary tract are common. E. H. AMSTROD

Heyd C. G.: A Procedure for the Repair of Accidental Injuries to the Rectum. *U. S. G. M. & Obst.* 1914 LXV 24. By Surg. Gyn. & Obst.

The author draws attention to the frequency of accidental injuries to the rectum low down in the pelvis and incident to the radical extirpation of the uterus and adnexa for malignancy. The technique is a modified tube-operation such as is used in sigmoidorectal anastomosis. A fairly rigid rubber tube about ten inches long perforated near its upper end is introduced into the rectum through the anus, and attached by means of a No. 2 chromic transfusion suture to the anterior rectal wall about one half inch above the injury. Upon gentle traction on the tube the two lips of the rectal defect are approximated and sutured with No. 2 chromic catgut. Upon further traction a partial intussusception of the anterior rectal wall is produced whereby two peritoneal surfaces are brought together with a right angle Cushing suture of Pagenstecher thread. The upper portion of the rectum is mobilized by two pararectal incisions through the peritoneum. Gentle but continuous traction is exerted by suturing the tube to the anal margin. The tube is removed at the end of five days.

#### LIVER, PANCREAS, AND SPLEEN

Cheney W. F.: Syphilis of the Liver Imitating Cirrhosis. (*m. J. S.* 94 col. 57). By Surg. Gynec. & Obst.

Cheney's report is based upon six cases of syphilis of the liver one of carcinoma of the liver diagnosed as syphilis but proved by autopsy to be carcinoma and a case of probable syphilis of the liver still under treatment.

The first case is interesting in that operation was performed for tumor of the lower abdomen accompanied by ascites. After hysterectomy the

liver was felt to be hard and nodular and the pathologist's report of section was syphilitic cirrhosis. After operation the patient developed hydrothorax as well as ascites. The Wassermann test showed reaction of blood and ascitic and pleural fluids were triple X positive. Intensive specific treatment however was futile because of the great destruction of liver proved at autopsy.

From the clinical data the second case seems to be a case of syphilis of the liver and pancreas, with a small liver and a large spleen. With intensive specific treatment the patient has been greatly benefited.

The case of carcinoma of the liver mistaken for syphilis, showed triple X Wassermann reaction, but this was due to concurrent syphilis and not to the enlarged liver.

The livers in this series of cases, were both large and small and the enlarged ones on palpation have appeared smooth and were usually quite tender.

Cheney concludes that in any case which appears to be cirrhosis of the liver the blood should always be examined for syphilis and if the Wassermann reaction is positive a vigorous specific treatment will often produce marvellous improvement. In cases with positive reaction liver disease may not be specific and in such cases specific therapy will be of no avail, but the therapeutic test will give valuable information and will do no harm.

THOMAS WAGNER HARMER

Wyand S.: A Case of Congenital Atresia of the Bile-Ducts. *Lancet* Lond. 1914 LXV 405. By Surg. Gynec. & Obst.

The case is reported of an infant which was normal at birth but became jaundiced when three weeks old. When four months old she developed snuffles a rash especially around the anus and passed clay-colored stools. The liver was much enlarged but the spleen could not be felt. The mother had had five other children who were all well, and had had one miscarriage six years previous. When the infant was ten months old a little free fluid was found in the peritoneal cavity which gradually increased in amount. The jaundice became more intense and the child died when one year old.

The author discusses the pathology and etiology of this condition, giving in detail the post mortem findings in this case. The veins of the abdomen were found enlarged and the abdomen filled with a bile-stained fluid. The liver weighed ounces and its surface was nodular. It was firm in consistence and tough on section. The cut surface presented a mottled appearance. The hepatic ducts were completely obliterated and at a very short distance from the junction faded away into the connective tissue of the gastrophrenic omentum so that they could not be traced to the duodenum—not even a fibrous cord remaining to represent them. The gall bladder was merely a fibrous cord deeply buried in the hepatic substance. Like the common bile duct

the cystic duct was lost in the gastrohepatic omentum and could not be traced to its junction with the common duct. The spleen weighed three ounces.

Microscopically the liver was extremely and markedly fibrosed. The normal lobulation was entirely lost and the hepatic cells showed all stages of degeneration. There was a slight degree of fatty degeneration.

The author believes that the condition was due to a cholangitis. A gastro enteritis traveling from the duodenum up along the common bile-duct would be capable of producing all the appearances found. He also believes that the same agent which caused the ascending cholangitis at the same time by absorption and circulation in the blood through the liver initiated a cirrhosis which was aided and increased later by the obliteration of the ducts.

EDWARD L. COR ELL

Jackson R. H. Anterior Choleodjejunostomy  
with Report of a Case. *J. Gynec. & Obst.*  
19 4, xxx 232 B. J. Surg. Gynec. & Obst.

Reconstruction of the common bile duct in man is often disappointing in results owing to the debilitated condition of the patients and the pathologic alteration of the surrounding tissues. Re-establishment of a physiologically active bile duct in man has not been placed in the category of well tried surgical procedures with definite indication and technique. When essayed for the first time there is apt to be an undue amount of hesitancy in the performance of the operation with a great deal of doubt as to its efficiency when completed. These considerations led the author to adopt in his second case the simple maneuver of utilizing a more mobile portion of the intestinal canal than the duodenum in its shortened and somewhat atrophied condition—the result of previous pyloromy—offered. A loop of jejunum—that portion embracing its first eighteen inches—was brought up in front of the transverse colon and the stump of the common duct united to it by a small-caliber rubber tube inserted into the stump of the duct and fastened with a linen stitch the other end of the tube being inserted into a small opening in the bowél which was then folded over the tube and as much of the duct as possible—about one half inch. The lateral surfaces of the jejunum were then abraded and tacked to the adjacent surfaces of the liver and pancreas. The patient made an uneventful convalescence and nine months after operation continues to be in good health.

Oslar W. Splenectomy. *Lancet* London 9 4 1930 B. Surg. Gynec. & Obst.

Oslar states that clinical experience has enabled the profession to recognize certain groups of cases in which splenectomy can be done and other groups in which it is contraindicated. In the latter class should be placed all cases of leukemia—no good results having followed its use here also cases in which the spleen is enlarged but in which there is

also disease of the liver and also in case of syphilitic enlargements of the spleen. As regards the latter group however it is thought possible that splenomegaly of congenital specific origin in children might be successfully treated by splenectomy.

Splenectomy is indicated in the following three types of cases: (1) Cases in which the spleen has been enlarged for years but the patient is in good general health. The benefit of such operation accrues because such cases if untreated often go on to chronic anemia there may also be leucopenia enlargement of the liver and even jaundice and ascites. (2) In some cases of Banti's disease. (3) In children in those cases in which the splenomegaly is acute and progressive. There remains a doubtful series of cases in which the removal of the spleen may do good such as some progressive forms of pernicious anemia Addison's disease hemolytic jaundice kala-azar and primary tuberculosis of the spleen.

DO ALD C. BALFOUR

### MISCELLANEOUS

Deaer J. B. The Pathology Underlying Abdominal Symptoms. *J. M. Soc. N. Y.* 914  
3 8 By Surg. Gynec. & Obst.

One of the most noteworthy advances in medicine is marked by the enlargement of the group of organic diseases at the expense of so called functional disorders. This is especially true of diseases of the abdomen. One cause of many failures to recognize organic abdominal disease is the tendency to demand typical syndromes for diagnosis. It is important that particular emphasis be laid on the remarkable variations from type which occur in the best understood diseases. From this standpoint a survey is made of a recent series of 121 cases of gall bladder disease 28 of duodenal ulcer 38 of uncomplicated pancreatitis and 53 of chronic appendicitis. In gall bladder disease the evidence indicates that the average patient received his infection in the fourth decade and in many instances much earlier so that this must be regarded as an affection of comparatively early years. In 10 per cent of the cases pain was never localized in the region of the gall bladder and in about the same per cent no tenderness was present. Jaundice was absent in four fifths of the cases and it should be emphasized that to wait for this symptom would be to miss the great majority of cases of cholecystic disease. The typical usually biliary subacidity but possessed no diagnostic uniformity the X-ray and fluoroscope were of practically no assistance.

Similar conditions exist in respect to duodenal ulcer. Classical cases may be recognized from history alone but the majority do not conform to the classical picture. In the above series pain was present in the epigastrium in 21 cases in the right hypochondrium it varied remarkably both in severity and character. The relation of the pain to eating is almost invariably constant in the early stages but as the ulcer migrates becomes calloused

or excites pseudoantral adhesions, the relationship may be much obscured. In 15 cases only did the pain occur at a definite period after the taking of food. The rarity of vomiting and particularly of haematemesis is exemplified in this series. Hyperacidity was present in less than half the cases.

In chronic pancreatitis the variations from type and consequent difficulties of diagnosis are even greater than in the preceding groups. A very interesting group is composed of cases of upper abdominal distention depending upon chronic appendicitis. Of the 385 cases of chronic appendicitis 26 were of this group. In none of the cases were the symptoms those of appendicitis. In 17 cases the pain was in the epigastrium, in 4 over the gall bladder, in 2 it was central and in 3 in the lower abdominal region. In 3 cases it seemed to radiate. Only 6 cases gave a history of vomiting. Some of these

cases simulated disease of the gall bladder, others simulated duodenal ulcers. The gastric analysis prevented its uniformity. Most of these cases were referred and operated upon in the belief that upper abdominal disease was present.

The author concludes with a discussion of points helpful in the differentiation of unusual cases, but concludes that there are groups of symptoms which certainly mean surgical disease of the abdomen, but which do not point with certainty to the exact nature of the trouble. Many cases have been fortunate enough to secure a curative operation because of an incorrect diagnosis, but many others have been long denied the benefit of surgery because of the overcautious lesion of the physician. He is sure of his ground before consulting a surgeon. It is maintained that chronic intestinal invagination is in almost all cases caused by a surgical condition.

## SURGERY OF THE EXTREMITIES

### DISEASES OF THE BONES, JOINTS, MUSCLES, TENDONS, CONDITIONS COMMONLY FOUND IN THE EXTREMITIES

Marrozzini. Experimental and Histological Study of the Action of Calcium Salt. In *Monatsschrift für Medizinische Wissenschaften* (Berlin) 1914, 14, 1-4.

By Zentralblatt für Chirurgie, 1914, 19, 1-4.

In 100 parts of bone a half there were 53 parts of phosphoric acid, 35 of calcium, 547 of carbonic acid, 122 of magnesium and 166 of sodium, aluminum and fluorine and carbonic acids. These were made up of the great part of it. The author mixed two parts of calcium phosphate and one of calcium carbonate and inserted them in the form of a syringe into the parts of the bone and the skin into the periosteum on bone that had been freed of periosteum into the osseous cavity of a bone and between broken or resected bones of rabbits in order to determine the effect of calcium salt on the tissue.

In the subcutaneous connective tissue and the periosteum they caused a small cellular infiltration without producing generation of the tissue and a slow but steady infiltration into the tissues. Applied to a bone which had been freed of periosteum and a shell of bone removed, they caused rapid reduction of the bone with the formation of a hard, bony, xanthous. When the calcium salts were placed in a filling in the new a type of bone that had a half part of it wall removed, they were completely absorbed in a few days to 45 days and replaced by new formed bone. It ought to be contrasted with broken or resected bones which produced a bony callous formation and a shell of bone.

The author shows that with the calcium salt an abundant production of tissue is seen which was quickly transformed into bone tissue. Small

bits of calcium salts were seen inside the cartilage cells, where they had been ingested by phagocytes. (Hansel)

Schickale. Ovaries and Growth of Bone (Ovarium und Knochenwachstum). *Monatsschrift für Geburtshilfe* 1914, 14, 1-4.

By Zentralblatt für Geburtshilfe und Gynäkologie, 1914, 19, 1-4.

The author reports two experiments on female dogs which show the effect of early castration on the growth of bone. In the first experiment there was only a slight difference in the length of the long bones in the castrated animal and in the control animal and the epiphyseal lines were also the same. In the second experiment two male dogs from a litter of three were castrated in the seventh week while the third was used as a control animal. At 14 months the control animal was decidedly smaller than either of the castrated animals, but these two also varied size which may well be attributed to the difference in size of the parents. The epiphyseal lines were ossified in the control animal and still not completely present in the castrated ones. A similar experiment performed on rabbits showed no effect of castration on the growth of bone. The genitals were also daily trophic in the castrated animal. (Klein)

Fay. O. J. Traumatic Parosteal Bone and Callus Formation. *Journal of the American Medical Association* 1914, 14, 1-4.

By Surgeon, Gynecology and Obstetrics.

The author reports six cases of traumatic parosteal bone and callus formation with four histologic examinations. Three of primary parosteal masses and one of recurrence. In these histologic reports the presence of old hemorrhage, the nature of the inflammation, the intimate relation existing between the muscle and the callus mass are the most interesting features. Another striking

feature is the important rôle played by cartilage in the formation of bone. The whole picture is that of a reparative process comparable perhaps to the formation of callus in fractures, and not that of an inflammatory process an ossifying myositis. For this reason the author advocates the use of the term parosteal callus instead of the misleading appellation ossifying myositis. While the present status of the knowledge of the growth of bone does not permit of an absolute statement as regards the origin of the callus mass, there seems to be much evidence to support the metaplastic theory, a changed relationship to the nerves, a changed nutrition and a temporary lack of functional activity result in a transitory loss of the specific function of the cells of the intramuscular connective tissue and cartilage and bone are formed.

The history of trauma and the clinical picture may suggest that the mass palpated is a parosteal callus, but the chief aid in diagnosis is the X-ray—the outlines of the bone shaft are clean cut and the shadow of the parosteal mass is separated from it by a zone of light. The time for operation is determined by the ripening of the callus mass as shown by the correspondence of the clinical and the X-ray pictures, and by the clear outlines in the latter. An early operation necessitates a considerable sacrifice of tissue, but if operation is postponed until the cells have regained the normal function, a conservative operation may be performed.

Lett H. Tuberculous Disease of Bone. *Ch. J.* 94, 414, 497. By Surg. Gyn. & Obst.

The author gives a statistical and didactic account of bone tuberculosis. The interest points in the discussion are summarized as follows:

1. In a series of tubercular bone cases 6 per cent were found to have pure culture of the bone bacillus.

2. The site of invasion is in the great majority of cases, in the end of the diaphysis, just below the epiphyseal line, but it may occur anywhere in the shaft or in the epiphysis, even in the periosteum.

3. True sequestra are frequent.

4. Diffuse or localized tubercular osteomyelitis of the shafts of the long bones occurs with some frequency. Radical removal of tuberculous foci either by curetting or by subperiosteal resection is advocated in some cases. F. C. Kimball

Da Costa, J. C. The Causal Relation of Traumatism to Tuberculosis. *Ch. J.* 94, 414, 499. By Surg. Gyn. & Obst.

The author finds position of some of the confusion and bewilderment so often presented in the courts during the trials of damages suits seeks to answer the question, Is an injury a direct or indirect cause of a tuberculous lesion?

The period of greatest liability of joint and bone tuberculosis is during the first five years of life, but is rare during the first year. More than half occur before the twentieth year, but cases in the middle-

aged are not rarities and even seniles are not immune. Demonstrable tuberculosis of the lung is rare in cases of bone and joint tuberculosis where the lesion is supposedly primary active pulmonary tuberculosis seldom develops.

Statistics show that a large per cent of all cases are directly determined by injury. The sequence is not of necessity a consequence. A definite tendency must be shown. Many cases arise without record or sign of antecedent injury or joint disease.

One school of surgical thought holds that bone and joint tuberculosis is never primary, always secondary. The other that while in most instances the disease is secondary in some it is certainly primary and in some cases injury is the direct determining cause of the disease. In such cases tubercle bacilli but not tubercles were in the part at the time of the accident or were carried there soon after it in the body fluids coming from some distant and probably unrecognizable area of disease or having entered into the lymph and blood directly after ingestion, inhaling or inoculation.

Vital resistance may be lowered generally or locally. In a slight injury trivial transitory hyperemia follows. Stasis occurs after more severe injuries. If blood contains bacteria more will be brought to the part during hyperemia and many of them will pass into the perivascular tissues through ruptured vessels.

Bacteria passing into damaged tissues tend to remain and thus become true menaces. During the prolonged stay—induced by traumatism—they batter down cellular resistance by means of bacterial poisons.

Tubercle bacilli act in the same way they may enter the blood in many ways without producing disease at the port of entry. Latent lesions tending to cure may be made active by some other disease.

Injury or may from time to time give bacteria to the system. They may pass through the body without producing any microscopical lesion. They can live in the blood the way or fatty material of the bacillus resists phagocytic and digestive action. They have an affinity for special parts and tend to settle into them. An injury tends strongly to localize them especially is this true of injury to certain bones. Slight injuries predispose more decidedly than severe ones. The hyperemia is too limited to admit of the prompt arrival and accumulation of phagocytes and alexines which does occur after a more severe injury.

Quoting Bosanquet, Da Costa says: In a case of tubercular arthritis, if the reality of the accident is proved, if from the time of the accident there continued to be some pain and stiffness in the part, and if the symptoms suggestive of tuberculosis arise at a period not over three months from the accident, we are justified in regarding the trauma as having been causal.

Traumatism is often a determining cause of bone and articular tuberculosis in other regions. This view is held by numbers of able and eminent

chicians and should be recognized by all courts of law

To deny the possibility of traumatic tuberculosis is to deny many of the truths of pathology and some of the plainest lessons of clinical surgery

A C BACMEZEE.

Williams, G Localization of Osteomyelitis, Especially in Adults *B J S* 9 1914 1 97

By Surg Gynec & Obst

The author reports five very interesting cases of osteomyelitis four of which are adults In three of the cases there was a recognizable primary source of infection. He draws the following conclusions

These cases bear out the general idea that infection of bone is primarily one of the marrow and therefore the medullary canal should be explored in all cases in which X rays do not give evidence to the contrary

In adults the localization of the infection is in the middle of the length of the shaft rather than at either end

In adults the infective osteomyelitis may be so subacute in character as to suggest a sarcoma rather than an infection in its clinical features

GEO I BAUMAN

Barrie G Haemorrhagic Osteomyelitis *S J Gynec & Obst* 9 4 12 4

By Surg Gynec & Obst

Further investigation and study confirm Barrie's earlier view that the generic term hemorrhagic osteomyelitis covers more exactly and precisely the clinical macroscopic and microscopic findings of those solitary intraosseous lesions in the long bones that have heretofore been diagnosed as medullary giant cell sarcoma myelogenous giant cell sarcoma myeloma medullary giant cell tumor localized osteitis fibrosa benign bone cyst traumatic solitary bone cyst etc

He insists that the so-called medullary giant cell sarcoma occurring as a solitary lesion in the long bones is in fact a localized regenerative inflammatory process without any evidence of malignancy. The giant-cells present a foreign body giant cells that perform the work of scavengers they are not tissue builders. Going hand in hand with bone destruction from nutritional inhibition and pressure necrosis are seen efforts at repair in the formation of replacement hemorrhagic granulation tissue

The author formulates a simple classification recognizing two distinct forms the chronic lesion assumes

Type A Chronic hemorrhagic osteomyelitis

Type B Chronic fibrocytic osteomyelitis

To type A belong the lesions that retain throughout their cycle the hemorrhagic granulation tissue picture giving practically no evidence of metaplastic change To this group belong the so called medullary giant-cell sarcoma myelogenous giant

cell sarcoma myeloma and medullary giant cell tumor

Type B is a secondary stage of the hemorrhagic form Here metaplasia has occurred the granulation tissue has been converted into replacement or proliferative fibrous structure With active metaplastic reaction there is retraction and cyst formation

To this group belong the so called benign bone cyst traumatic solitary bone cyst and localized osteitis fibrosa

All of these lesions give a history of initial trauma they are localized and so far as we know at present are non-infective and are non-suppurative

Smith, J F Osteitis Fibrosa Cystica II *V J* 914 11 9

By Surg Gynec & Obst

The author cites various reports in the literature of bone cysts and benign tumors of bone and also reports an interesting case of a woman aged twenty years, who sought medical advice on account of an enlargement of the left side of the lower jaw of many years duration Two years previous she had had a premolar tooth drawn the dentist evidently considering the trouble to be an alveolar abscess of dental origin Inasmuch as the swelling persisted the dentist attempted to remove some necrotic bone supposed to be at the bottom of the fistula which persisted after the tooth was drawn This attempt was unsuccessful When examined by the author the patient had a marked deformity of the face due to the bulging of the left side of the lower jaw Inside of the mouth a mass could be seen which involved the left side of the lower jaw expanding the jaw both upward and outward. The mass was firm and smooth on palpation, no cracking or fluctuation being obtained X-ray showed a large mass consisting of a central soft area surrounded by a thin shell of compact bone at the bottom of which a fully developed tooth could be seen

Some of the tissue removed by operation was submitted for examination and was found to be mucoid connective tissue Apparently there was inflammation but there was no evidence of tumor formation hence the diagnosis was made of bone cyst of inflammatory origin

C V JACOB

Berry J Clinical Notes on Maligant Tumors of Long Bones. *C J* 9 4, 12, 465

By Surg Gynec & Obst

Discussion of sarcoma of bone takes up a large part of the article which is splendidly illustrated with photographic reproductions of the bone and tumor Attention is called to the fact that pain may be very slight Other conditions simulating tumors are cited for example the chronic forms of osteomyelitis with bone production in the periosteal region of the shaft A mistaken diagnosis leading to amputation for this latter condition has come under the author's notice

Sarcom of the ends of the long bones leading to joint inflammation and simulating primary joint disease



case is not uncommon with it however even after swelling of the joint and great pain movement although restricted is not painful Old ununited fracture with false joint and tumor like formations of fibrous tissue may also be taken for tumors

ALAN R. COLVIE

Llewellyn R. L. J. and Jones A. B. Osteo-Arthritis of the Hip Diagnosis in Its Early or Pre-Osteophytic Stages. *Lancet* Lond 1914  
LXXV 365 By Surg. Gynec. & Obst.

A strong plea is made for early diagnosis which it is stated can be made long before the formation of osteophytes. Among the subjective symptoms are pain local and referred tenderness and occasional associated lumbar pains. Painful stiffness in the joint first attracts attention. Pain in the early stage is attributed to incarceration of enlarged villi. It is therefore inconstant and may be located anteriorly or posteriorly near the joint or about the great trochanter.

Local tenderness due to tension of the capsule is very important in the differentiation from the sciatica etc. and may be elicited by deep pressure in the groin or behind the trochanter.

Referred pains often present for years or decades before bone changes are disclosed by X-ray are frequently mistaken for sciatic or rheumatic conditions. These pains may be referred along the distribution of the sciatic the anterior crural the obturator or the external cutaneous nerves. Simultaneous pain along the tibiocrural or obturator as well as along the sciatic is considered very distinctive.

Climatic conditions and barometric changes have little influence. The pain is dependent upon mechanical or static causes and this opinion is strengthened by the fact that pain disappears when ankylosis is complete. The associated lumbar pains are differentiated from the sciatica and lumbago by the insidious onset and subacute character.

Among objective symptoms may be mentioned (1) Initial temporary lump (2) occasional pinching of villi (3) change in attitude (4) limitation of motion the result of muscle spasm secondary to joint irritation.

The above are symptoms of what may be called the primary or pre-osteophytic stage with clinical manifestations corresponding to those of a villous arthritis.

Treatment in this early stage should be directed to the correction of abnormal strain arising from flat foot excess weight etc. combined with temporary fixation at rest and passive motion and hyperemia.

F. J. GALE

Brackett E. G. Arthritis Associated with Lesions of the Genito-Urinary Tract. *Bull. M. & S. J.* 914 1913 63 By Surg. Gynec. & Obst.

In the increasing attention which is being given to the etiology of the arthritides special consideration

is being taken of the portals of entry of infection and the special joint manifestations associated with various sources of toxemia. It cannot be said that infections from given sources will always give characteristic joint symptoms but there are some symptoms which will give a definite clue to the direction of the search.

The source of infection may be conveniently divided into three groups (1) bacteria or bacterial toxins (2) chemical toxins — gastro-intestinal (3) chemical irritants — uric and oxalic acids.

In the first group there is no source more prominent than the genito-urinary tract. The organism is either the gonococcus or the colon bacillus. Arthritis from gonococcus infection may be either acute or chronic. In the acute type marked by sudden onset of pain tenderness and swelling usually non-articular the organisms are sometimes found in the joint cavities which seems to indicate that the inflammatory process is a bacterial one. Pathologically the joint shows a greatly increased vascularity of the synovial membrane capsular thickening and finally destruction of the cartilage obliteration of the joint cavity and fibrous or in complete bony ankylosis. In the chronic type the organisms are not found in the joint the symptoms and pathologic changes, therefore being due to the toxins and the process being a disturbance of nutrition rather than an inflammation. There is a history of repeated attacks with mild but persistent symptoms polyarticular in distribution. The pathology is not so extensive as in the acute form and ankylosis from destruction is rare.

Arthritis from the colon bacillus is polyarticular and most frequent in the spine but has no pathognomonic characteristics.

Methods of treatment have changed from symptomatic to etiological in the course of the acceptance of the primary focus idea. In the acute cases early opening of the joint cavity and hot lavage followed by complete closure is good surgery. For the later cases with adhesions oil infiltration is indicated. This should be done by open operation in order to dispose of adhesions already present.

W. A. CLARK

Hastings, T. W. Complement Fixation Tests in Chronic Infective Deforming Arthritis and Arthritis Deformans. *J. Exp. Med.* 1914 22 5 By Surg. Gynec. & Obst.

The author reports 7 cases of arthritis deformans which were positive to tests for streptococcus viridans antigen thus proving their infectious nature. These cases constituted 39 per cent of the total number tested. A group of 26 control cases, not arthritis, were consistently negative to complement fixation tests for streptococcus viridans. Thirty-five strains of streptococcus viridans obtained from tonsils teeth prostate and blood were used as antigens. The experiments are reported in detail. Cultures of streptococcus and staphylococcus, from the tonsils endometrium and sputum gave no reaction with the patient's blood.

The conclusions are that streptococcus viridans excites the production of a complement fixing substance in cases of arthritis deformans and therefore it is the probable causative agent of the disease. Serum from one case may react positively to two organisms, as streptococcus viridans and gonococcus. In this case streptococcus viridans should be considered the causative agent since gonococcus infection is frequently latent in the genito urinary tract and only rarely produces the clinical signs of arthritis deformans.

W. A. CLARK.

Holvertson W. C.: Acute Rheumatic Arthritis in Children. *Merck's Arch* 1914 21 305

By Surg. Gynec. & Obst.

The writer emphasizes the necessity of being ever on the alert for the mild cases of acute rheumatic polyarthritis as it is these cases, so easily overlooked and consequently untreated that result so disastrously as regards the heart. Vaccine treatment is being used with most satisfactory results.

A. J. DAVIDSON.

Finch E.: Internal Derangement of the Knee-Joint. *U. M. Rev.* 91 1111

By Surg. Gynec. & Obst.

Finch gives a clear and concise description of the anatomy of the knee-joint which he rightly thinks very necessary to the diagnosis of injuries to it. Sprains are due to wrenching and twisting. They cause great pain followed by effusion into the joint and are best treated by absolute rest and compression bandages renewed daily. No splint should be used. Active motion should be instituted at once, passive later.

Lacerated and ruptured lateral ligaments are severe injuries, causing the patient to fall to the ground. Immediate effusion means hemorrhage. The treatment is the same as in sprain but is continued for a longer period. Plants to prevent lateral motion are a help. Semilunar cartilage injury is nearly always to the internal and is done by lateral force with the leg partly flexed; the anterior end is crushed or torn loose possibly displaced to the center of the joint. The leg cannot be flexed. Moving the leg back and forth often reduces the dislocation. When it becomes chronic operation for removal is necessary. Coalescence is not infrequent. The author thinks if the acute cases were properly treated at rest for three weeks there would be fewer chronic ones. He does not believe in retentive apparatus or drainage after operation. In his cases the average time of returning to work was seven weeks. Loose bodies when free in the joint should be located by local anesthesia at least located and fixed by local anesthesia before a general anesthesia is given for removal since the patient if conscious, can aid greatly in determining the body's position. Rupture of the crucial ligaments follows violent accidents only and is diagnosed by the mobility of the joint. Rest and the use of a retentive apparatus for a long time gave a fair result.

but some permanent disability is pretty certain to result. No movement should be allowed before two months.

Other derangements are separation of the tibial tubercle, infrapatellar pads of fat, which when caught between joint surfaces, should be excised, trigger-knee, in which a loud snapping is caused by a pedunculated foreign body which should be removed, surrounding tendons which get caught and slip over extensors and finally rarely dislocation of the patella, the treatment of which is operative.

C. A. STOKES.

Gruber G. B.: Further Study of the Pathological Anatomy of Circumscribed Ossification of Muscle with Remarks on Myositis Ossificans. (Weitere Beiträge zur pathologischen Anatomie der muskelaebene Myositis ossificans oberhalb der Kniegegend.) *Monatsschrift für Medizin und Chirurgie* 94, 1914, 763. By Zentralblatt d. ges. Chir. u. i. Chirurgie.

The author adds to the 7 cases of circumscribed ossification of muscle previously described by him 12 more 6 of which were caused by trauma 2 accompanied by tubercle joint diseases, and 4 specimens showed large unilocular exostoses. From his histological examinations which always showed injury encroaching upon the muscle fibers with interstitial inflammation and formation of granulation tissue from which anaplastic or metaplastic bone or cartilage was formed. Gruber concludes that ossification of the muscles is the result of an inflammatory process in the region of the muscle. Neither does he admit the periosteal origin of the large exostoses in his four specimens, which apparently proceed from the bone but he thinks the muscle takes an active part in the formation either alone in the case of movable pieces of bone or in conjunction with the irritated periosteum at its insertion into the bone.

He assumes the same mode of origin for the multiple progressive forms of myositis ossificans, as the histological findings are the same. He considers the progressive form a metaplastic reorganization process, probably congenital or acquired defective organization or a functional disturbance of the central nervous system. He explains the presence of muscle adhesions in all the cases as being analogous to other well known processes of calcification where by vascular connective tissue comes in contact with calcium bone is formed.

The first requirement is always present as there is granulation tissue at the injured place in the muscle. The presence of calcium can be demonstrated in some cases by the sulphuric acid reaction in them, with a high acid content of the muscle it may be assumed. In other cases where no local collection of calcium can be demonstrated the calcium content of the blood and lymph is available which is increased by the fact that there is increased destruction of bone either from general erosive disease as syringomyelia or tabes, or from the fact

that trauma has caused acute bone atrophy. The same explanation may hold in the progressive form as it is generally formed in neuropathic or deformed subjects. The question of the disposition to ossification of bone is transformed into the question of the calcium salts available for reaction with the granulating connective tissue. He suggests the name *myopathia chronica osteoplastica* instead of *myositis*. SIEVER

**MacDonald T. L.: Contractured Psoas Parvus  
Tendons Their Significance and Clinical  
Relationship to Lesions of the Right iliac  
Region S. J. Gynec. & Obs. 914 215  
By Surg. Gynec. & Obst.**

The author cites clinical cases to show the symptomatic resemblance to subacute and chronic appendicitis, and calls attention to the readiness with which the contracted tendon may appear to perpetuate post-operative distress in the right iliac region. He comments upon the unsuspecting attitude held concerning its existence and summarizes as follows:

1 The pre-operative flexion of the right thigh is so frequently a symptom of inflammation of the vermiform appendix that it seems to confirm this diagnosis.

2 In the case of moderate contracture complete thigh extension may be possible but painful. Restriction is definite.

3 In the suppurative cases of appendicitis the contracted tendon may readily be overlooked, because of the importance of terminating the operation at the earliest moment of indulging in the least possible intra abdominal manipulation and because bowel and omental adhesions supervene

4 It may not be significant but in each case the psoas parvus tendon on the other side was examined and found normal except in Case 2

5 The cardboard like edge of the shortened tendon is capable of damming — to a most troublesome degree — the cæcal current by forming a saddle-bag cæcum as the gut rests upon it the relief of constipation after tenotomy being quite noteworthy even while the patient is lying in bed.

6 At present the stripping up of the peritoneum from the outer edge of the abdominal wound, as though to expose the uterus seems a satisfactory and feasible method of exposing the tendon for tenotomy when the abdomen is opened through the oblique incision.

7 Prompt relief of the symptoms may be expected after complete tenotomy.

8 In the post operative cases the leaning attitude of the patient may well suggest adhesions

9 The persistence of thigh flexion under anesthesia is characteristic

o All of these patients were inclined to be neurotic

11 It now seems somewhat strange that in a hospital service of eighteen or more years similar cases have not been encountered before which sug

gests that it would be wise to examine for and exclude this lesion when operating in the lower abdomen.

12 The unsuspecting attitude of both medical attendants and surgeon is emphasized by the fact that the only instance in this short series wherein the contracture was even suggested before operation was in the last one seen.

## FRACTURES AND DISLOCATIONS

Sherman H M and Tait D: Fractures near  
Joints Fractures into Joints. Surg Gynec of  
Obst 1914 xix, 131 By Surg Gynec. & Obst.

The author points out that a fracture near a joint develops mechanical conditions due to the short fragment and mobile joint and that the restoration of the normal anatomy and physiology is thus made more difficult. Special attention is drawn to the fact that different surgeons have suggested certain positions in different fractures which restore most satisfactorily and maintain most accurately the alignment of the fragments, and that then function returns as a matter of course. These positions in all of these different joints have been found to be at the limit of normal motion and in the direction in which motion is most difficult and slow to regain after the older methods of dressing.

The fractures specialized are those at the upper end of the humerus, in which the position of choice is that of abduction, to make the major fragment follow the minor at the lower end of the humerus in which the position of choice is that of complete flexion at the hip in which the position of choice for non impacted fractures is that of adduction at the ankle in which the position of choice is that of supination with the foot at right angles to the leg, on an anteroposterior plane. These are now adopted methods of treatment and in all of them a position has been selected which is the best one to become possible after treatment. The joint space and its fragment is more fully held by ligamentous and other tissues to the separation of fragments is less likely than it is to the large spaces, as a minimum movement beyond the proper limits is not to be feared some times, and a great deal of motion is allowed.

can be tolerated inside a joint and if it would be right therefore to put them there even on the bearing surface of the joint. Dogs and cats were used for this work and screws of steel of plated steel, of brass and, in some instances small plates of annealed clock spring were put inside the knee joint sometimes along the side of the bone but usually directly on the bearing area of the articular surface of the femur.

The conclusions arrived at were that the transarticular method is the only practical method which gives perfect access to certain joint fractures and permits accurate reposition of the fragments that it is a perfectly innocuous method that there is a decided mechanical advantage in using intra articular screws or plates to insure accurate maintenance of fragments that these seem to be *per se* innocuous that they excite no reaction different from that caused in any other connective tissue that when properly countersunk they are rapidly excluded from the joint-cavity by a layer of newly formed fibrous tissue which grows up from the marrow spaces and that under aseptic conditions they remain firmly imbedded that they cause very little more reaction than the autoplasmic bone peg that even if not entirely countersunk they may still be practical and innocuous because the projecting portion cuts for itself a path in the cartilage of the opposite bone and that when this has been accomplished normal function returns. This transarticular route is suggested as the method of choice in fractures traversing joint surfaces or in displaced epiphyses when anatomical apposition of the fragments cannot be maintained except by the use of some internal fixation apparatus.

Hiltzot, J. M. Fractures of the Upper End of the Humerus. 11 M J 94 1915  
By Surg. Gynec. & Obst.

The writer analyzes 393 cases of fracture of the upper end of the humerus observed during the past ten years. Of these 68 were through the surgical neck, 101 through the tuberosities, 4 through the anatomical neck associated with dislocation of the head, 2 through the surgical neck with dislocation and 11 were fractures of the great tuberosity some of the latter were also associated with dislocation. Only 7 were observed in children of which 3 were epiphyseal separations and 4 fractures of the surgical neck.

The mechanism of the various forms of fracture the variety of displacement and the influence of the musculature are next discussed also symptoms and diagnosis.

As to treatment in the vast majority of cases abduction and external rotation of the lower fragment will suffice. When there is overriding some form of traction is advised as a preliminary. In children and robust adults an anesthetic is advisable while in older patients anesthesia should be avoided when possible. When there is little or no displacement fixation after reduction is accom-

plished by bandaging the arm to the side with or without a pad in the axilla. In others where greater external rotation and abduction are necessary molded plaster splints are more suitable.

Open operation was resorted to in only 3 per cent the indications being as follows:

1. Fractures with dislocation of the head. The head may be removed or when possible, replaced and fastened to the shaft by a screw or nail.

2. Epiphyseal separations, unless absolutely accurate replacement is otherwise obtainable.

3. All fractures in which the reduction is imperfect and in which a bad result seems likely.

Local anesthesia supplemented by gas and oxygen during the short period of painful manipulation was sufficient in most cases. Except in long oblique fractures no internal fixation is necessary retention being easily maintained by abduction and external rotation and pressure upward to compel engagement of the fragments. The use of metal splints, internal or external or of intramedullary splints is considered an absurdity. In the long oblique or spiral forms absorbable sutures passed through drill holes insure sufficient fixation.

A good result cannot be claimed unless there is abduction of 90° external rotation permitting the hand to be placed on the seventh cervical spine and internal rotation permitting contact of the back of the hand with the mid lumbar region.

In the after treatment the author lays stress on the early use of baking massage and active and passive motion and expresses the belief that many poor results are due to lack of attention to these details.

F. J. GARNER

Freiberg, A. H.: Infraction of the Second Metatarsal Bone. S. & Gynec. & Obst. 194, 112, 9  
By Surg. Gynec. & Obst.

Six cases are reported in which the patients presented themselves because of pain at the metatarsophalangeal joint of the second toe. In these cases the X-ray examination showed that there had been an infraction of the distal end of the second metatarsal bone. In three of the cases there were loose bodies in the joint and in two of these they had to be removed in order to give relief. No case was seen less than four weeks after the injury and in two cases there was no recollection of the injury. The trauma was always a slight one occurring while playing tennis in three of the cases and caused merely by a false step.

These cases have probably often failed of recognition because of the similarity of the symptoms to those of the so-called anterior flat foot. Aside from the roentgenogram the diagnostic features are the traumatic origin, thickening and marked tenderness of the second metatarsophalangeal joint and grating on passive movement if loose bodies are present.

The treatment is purely mechanical as when loose bodies indicate arthroscopy or their removal, either because of their size or number. In one case

permanent relief without operation resulted even though a loose body 20 mm in diameter was present

Not a little interest attaches to the mechanism which this injury to the foot causes. Under normal circumstances the second metatarsal bone is slightly longer than the first. In the presence of a diminished power of toe flexion and especially of the great toe it is apparent that forcible impact to the ball of the foot against the ground not sufficiently guarded by the flexor power of the toes will cause the distal end of the second metatarsal to bear the brunt of the blow

The author thinks that in this may be found the explanation of the mechanism of this injury

Davies W T F: Treatment of Fractures S Afric M Rec 914, xii, 283  
By Surg Gynec & Obst

In a general way, Davies reviews his experience in the treatment of fractures

He discusses the results of early-day treatment of fractures, showing that perfect cures were never to be expected that it was then almost impossible to get proper relationship between the articular surfaces of a joint

He emphasizes the importance of perfect reduction without which the successful treatment of fractures cannot be attained and also states that great difficulty is to be encountered in securing perfect coaptation

One of the principal sources of the revelation of the faults in the treatment of fractures has been the X ray. Even after apparent successful reduction and the part looks perfect the X ray may show that there is no reduction whatever

For the sake of the patient and the protection of the surgeon the author advocates the use of the X ray together with postero anterior and lateral view photographs

The great difficulty in getting reduction is due to the slight bowing of the muscles and tendons caused by the inflammatory exudation. The muscles in the normal state being stretched in straight lines along the bone axis any undue pulling in trying to get relaxation only results in tearing

This condition is not to be found in a compound fracture or in a recent fracture when cut down upon both conditions may be reduced with comparative ease

In nearly all cases general anesthesia should be employed that the surgeon may do his work thoroughly and without haste

Perfect coaptation the bone lines being placed exactly together with no rotation of one fragment on the other must be secured

In a compound fracture with deep lacerations the opening of the wound and cleansing with some antiseptic and then placing of a wire tightly around the fragment—plate or screws being used

In a compound comminuted fracture all fragments if possible should be saved and fitted together the parts being held together with wire. Free drainage is necessary. An iodoform gauze drain saturated with pure glycerine may be used the gauze being passed through a tube or the gauze may be used as a packing. The glycerine has the effect of bringing about early absorption

In oblique fractures, Pott's and Colles fractures fractures of the patella and olecranon T-shaped fractures of the knee and elbow reduction is often impossible without operation and in keeping the fragments in place plates screws and wire should be used

There should be no fear of operating on these cases. If properly done results will be successful but if operative procedure is not attempted in cases where reduction cannot be accomplished in any other way deformity is sure to result

JONV H SHAW

Woolsey G: Conservatism in the Operative Treatment of Simple Fractures V J St J Med 914 xi 409 By Surg Gynec & Obst

The use of any old or new operative method of treatment which best meets the indications when operative treatment is decided to be necessary or advisable and safe is the author's idea of conservatism in operative treatment of simple fractures

He recognizes that good function is much more important than the position of the fragments and that it may be obtained when the position is by no means perfect and that it may not be present when the position is nearly perfect although it is most likely to be

The first essential to conservatism in the operative treatment of fractures is a careful clinical diagnosis verified or corrected by anteroposterior and lateral X ray views whenever it is possible. If the fragments are not in good position reduction must be attempted and the result shown by another X ray. This attempt at reduction must be made early—during the first four or five days if possible

The operative treatment of fractures is undertaken to better fulfill two fundamental requirements of fractures,—reduction and retention

Reduction is the most important feature and is common to all methods of open treatment. If there is overriding it should be overcome by traction etc

For the retention of bone fragments there is now a large armamentarium for the operative treatment of fractures by plates and similar methods

The chief objections to the use of metal plates are (1) that they cause a simple into a compound fracture for the time being as do almost all operative methods of treatment (2) that it leaves a foreign body in the tissues. Metal plates are better formed with less danger of causing trouble when applied to bones like the femur which are well covered by muscles, rather than to bones covered only by skin like the tibia. Other objections to metal plates are that they cause osteoporosity of the bone and delay in callous

formation and ossification hence delayed or non union has not infrequently resulted

These objections and that of leaving a foreign body in the tissues are met by the use of bone-plates, usually taken from the crest of the tibia. In fractures of the tibia a V shaped groove is cut on the inner surface with a Hartley saw. Into this a bone-plate four inches long, triangular on sections cut from the crest, cut from the same or opposite tibia is fastened by chromic gut passed through drill holes above and below the fracture. This seems to stimulate rather than retard repair, hence is useful in delayed union. It is not so often suitable for the femur.

The author has had no experience with the intra medullary dowel of bone. In some cases he believes that a nail or a screw meets the indications more simply and more effectively than a plate or anything else.

C. M. JACOB

Corner E. M.: Some Practical Notes on Dislocations of the Hip. *P. Schuster Lond.* 1914. xxi + 84. By S. Gynec. & Obst.

Corner bases his observations on the cases of dislocation of the hip which have come to St Thomas Hospital, London since 1890. He considers the usual textbook classification as too elaborate dividing the cases into two varieties, either posterior or anterior to a line drawn through the center of the acetabulum and anterior inferior spine. He bases his diagnosis on the position of the limb the position of the great trochanter position of the head of the femur and the skiagraph. The relative frequency of posterior to anterior dislocations is about 7 to 1. The necessary causative factor is violence to a body supported by an abducted leg. It is much more frequent in males than in females and occurs most frequently during the second decade. He details the manipulations necessary to obtain reduction in the two varieties.

H. W. WILCOX

Greig, D. M.: Recurrent Luxation of the Patella. *Edinb. M. J.* 9, 4, xiv, 46.

By Surg. Gynec. & Obst.

True traumatic dislocations of the patella are uncommon and, when they do occur are of minor importance to other coincident injuries.

The author has considered conditions characterized by outward displacement of one or both patellae and their etiology.

The patella being a sesamoid bone and developed within the tendon of the quadriceps extensor crureus is modified to articulate with the trochlear surface of the condyles of the femur. The outer condyle is prolonged further upward and is flatter all of which facilitates outward displacement but in complete flexion the inner condyle projects further downward. The patella is held in place by the capsule and tendon of the quadriceps, but in effusion, the tension being increased displacement rarely occurs.

Abnormal or irregular conformation of a knee joint, with lax ligaments—which is considered a negligible factor—admits of a greater range of motion, hence greater liability to displacement and variations in the axis of the femur or of the constituent muscles of the quadriceps extensor renders the patella more liable to be misplaced. Young adults are more subject to displacements and they often follow some exanthematous diseases, such as diphtheria, scarlet fever and anterior poliomyelitis.

The most prominent factors are traumatism, defective bone development and imperfect muscular action due to cerebral and spinal affections. The treatment advised is rest in bed and splints in the recurrent type surgical correction of abnormal bone development and limited exercise with a protecting leather knee-cap.

II. W. MALTBY

## SURGERY OF THE BONES JOINTS ETC.

Pringle, J. H.: Analysis of Two Hundred and Thirty Cases of Open Fractures of the Long Bones Treated by Operative Methods. *Bru. J. Surg.* 1914, 11, 10. By Surg. Gynec. & Obst.

The author reviews the results of 230 cases of open fracture of the long bones treated by operative methods. He divides the cases into those treated by fixation—by wiring, plates screws etc.—and those treated by simple cleansing. Secondary amputation was necessary in 6.25 per cent of the fixation and 14.8 per cent of the cleaned cases. Most of the cases were treated by fixation and he considers the results obtained very satisfactory. On account of the free opening up of the wound that is necessary for fixation sepsis was much less common than in the cases treated by simple cleansing and external fixation.

Geo. L. BASKIN

Vulpius, O.: Operative Mobilization of Joints (*Beiträge zur operativen Gelenkmobilisierung*). *Münch. med. Wochenschr.* 9: 1, 1914, 506. By Zentralbl. f. d. ges. Chir. u. i. Grenzgeb.

The author recommends the bilateral incision and the interposition of flaps of fascia with pedicles for the mobilization of the knee-joint. The best cases are those of post-traumatic akylosis of the elbow joint. He does not hesitate even to undertake the mobilization of the joint in closed tuberculous, and gives a detailed description of three successful cases of operation as follows:

1. In a case of ankylosis of the elbow joint in a 10-year old boy after fracture of the joint the interposition of a flap from the triceps tendon resulted 4 months later in active extension to 100 degrees, active flexion to 30 degrees.

2. A 35-year-old man had had tubercular ankylosis of the hip joint for 25 years. A new joint cavity was made of fatty tissue and a layer of the gluteus terposed. Six and one-half years after the operation the patient could walk without pain complete flexion and extension to 50 degrees was possible.

3. The third case was that of a 26 year old woman with bilateral ankylosis of the hip after septic rheumatism of the joint. Operation was performed on both joints within four weeks. Fascia and muscle were interposed. The findings one year later were: On the left active flexion to 80 degrees abduction to 30 adduction to 10 on the right active flexion to 80, abduction and adduction to 40 from the midline. The patient can sit and kneel, and can walk for two hours with a cane. Vulpinus has performed the same operation repeatedly with good results in arthritis deformans and has been able to stop the pain and restore the function. WERE.

Devine H. B. Free Fat and Fascia Transplantation in the Treatment of Ankylosed Joints and Diseases of Bones. *Am J Surg* 1914 123 By Surg Gynec & Obst

Seven out of eight transplants of fat into bone performed on animals in Garre's clinic are reported to have been successful—one case healing perfectly in the presence of mild inflammation. This positive result in a case of infection offers the hope that fat may be used for filling in bone cavities in osteomyelitis where it would serve as a framework for redevelopment of bone. Two such cases are reported: one in the temporomaxillary joint and one in the femur with healing by first intention.

The technique is as follows: All infected sinuses are dissected out without opening. The infected wall of bone is buried through clean incision with pure carbolic acid and washed out. After all gloves and instruments have been changed another burning is done and the cavity rewashed and dried. The transplanted fat must not be touched with the fingers and must fill the cavity completely. Other uses for which the fat transplant has been successfully employed by the author: reparation of the brachial plexus from the sharp edge of a deformed first rib; filling in the cavity of a central hydrocele of the hip; isolating the ulnar nerve from scar tissue of a fracture of the humerus. The most valuable use of such transplant in treatment of ankylosed joints. The free transplant has the advantage of the pedicle flap in that it can be made as large as necessary and it flows free manipulation.

In ankylosed shoulder of eight years standing was mobilized by complete loss of the head of the humerus in a layer of fascia lata with fat after an unsuccessful pedicle flap. Other case report of ankylosis of the hip-joint which had been ankylosed following a fracture by enclosing the head of the femur in a free fat transplant and a case of bilateral ankylosis of the temporomaxillary joint in this latter case as the patient was ill to open his mouth wide enough to take food, the action of the incisors was necessary. The complete bony ankylosis was fused loose and piece of fascia lata doubled with fat and was trenched. Three months later the patient had almost perfect motion of the jaw. W. A. CLARK.

Essers E. Operative Treatment of Paralysis of the Shoulder (Ein Beitrag zur operativen Behandlung der Schulterlähmung). *Zschr f orth p Chir* 914 1914 479 By Zentralbl f d. ges. Chir u. Grenzgeb.

After a short discussion of the disturbances in motion of the shoulder joint Essers describes a case of trapezius paralysis from the Lange clinic and discusses the pathology and treatment of the condition. It is generally caused by injury to the accessory for instance in the removal of cervical glands but the clinical picture of complete paralysis of the trapezius may vary. It may be possible to elevate the arm laterally above the horizontal because of the vicarious action of other shoulder muscles, although the force is decreased. But the sinking of the shoulder forward and downward is characteristic as well as the standing out of the scapula from the spinal column and incoordinated excursions of the scapula on lateral movements of the arm. These phenomena are caused by shortening of the serratus and the pectoralis, and a lengthening of the excursion of the acromioclavicular joint backward and inward as a result of the lack of the action of the trapezius.

The author speaks of the operative and non-operative treatments of paralysis of the shoulder joint none of which have given uniformly satisfactory results. Rothschild's method is an advance in the treatment: he fixed the scapula to the spine with a strip of fascia. In a similar way in a case of congenital bilateral absence of the trapezius Cramer fastened the scapulae together and to the spine. In a series of interesting cases of paralysis of the trapezius in syringomyelia Lange instead of the strip of fascia used a strong silk suture which he carried obliquely upward from the median angle of the scapula through the subcutaneous fatty tissue and fastened to the spinous process in the region of the lower cervical vertebrae. The functional result was very good. The scapula was held in normal position the overstretched rhomboides and levator scapulae were relieved and after a suitable orthopedic after treatment the arm could be lifted to the perpendicular. DECAER.

Vulpus O. Lengthening of Tendons by Sliding (Über die Sehnenlangung durch das Rutschenslassen). *Am J Surg* 1914 123, 7 By Zentralbl f d. ges. Chir u. Grenzgeb.

The simplest method of tendon lengthening subcutaneous transverse section does not give good anatomical and functional results and the plastic lengthening of tendons whether performed by the open or subcutaneous method injures the tendon to a very considerable extent therefore Vulpus recommends a method which he calls sliding of the tendon. The tendon is cut high up where it enters the muscle and so has muscle fibers on each side of it. The incision is made obliquely or in the form of a reversed V with the peritendinous part of the center. When let loose the peripheral part of

the tendon slides downward without interrupting the continuity of the tract. The greatest indication for this method is found in paralytic and spastic contractures as well as in ischemic contractures where there will be abundant opportunity to test it.

GLASSNER.

Moore J W: Surgical Treatment of Infantile Paralysis. N Y M J 914 c 404

By Surg. Gynec. & Obst.

A short description of infantile paralysis is given followed by a discussion of the various methods of treatment of the fourth or stage of residual paralysis, and a report of cases of tendon transplantation and arthrodesis.

Many of the methods which have been used are mentioned such as screw fixation of joints after Magruder silk ligaments and muscle transplantation. Any operation involving the use of the tendons of paralyzed muscles is condemned.

Light interesting cases are described including operations on a hip, a shoulder and ankles.

F. C. L. M. D.

Binnie J F: Amputation of the Leg. I

S 72 Phila. 1914 ix 160 By Surg. Gynec. & Obst.

The essayist states that the choice of method and site of leg amputations below the knee depends first on the lesion for which the operation is required and second on the use which is to be made of the stump.

He then discusses the first point in malignant disease and gangrene describing the method of Moskowitz and that of Sandrock to determine the line of demarcation. Second, the use which is to be made of the stump is a factor of prime importance in the choice of the site of amputation. If an artificial limb cannot be secured it is of great importance to save as much of the limb as possible and to provide a stump upon which the weight of the body can be supported without harm resulting. An example of such an operation where the foot only is amputated is the osteoplastic procedure of Pirgoff; the heel being partly saved.

He discusses the seat of election for amputations of the leg, the stump being sufficiently long to attach an expensive wooden peg. Where the patient can afford a good artificial limb the lowest favorable site for section of the leg bones is eight inches below the growth and the highest point of the patella.

If necessary to amputate above the seat of election, disarticulation at the knee has usually been advised. Lifting weight bearing capacity may be impaired by adhesions of skin etc. to bone insufficient covering of the bone irregularity of the end of the bone stump neuroma and nerve endings caught in scar tissues.

In discussing means besides asepsis to avoid these faults he describes the method of section of the various tissues from skin to bone, stripping up of the periosteum and the scraping out of bone-

marrow for one-third of an inch, thus favoring painless stumps. He approves of the subjecting of the stump to a reasonable amount of therapeutic abuse and describes Hirsch's method of accomplishing this. He also describes his own modification of the Bier osteoplastic operation. H. W. W. COV.

## ORTHOPEDICS IN GENERAL

Neuh J H and Oppenheimer E D: Congenital Contractures of the Fingers with the Report of a Case of the Familial Type. Surg. G. & Obst. 1914, xix, 103

By Surg. Gynec. & Obst.

A case of bilateral contracture of the fingers running through three generations is described. The fourth and fifth fingers of the right hand were operated upon. It was then found that the resistance to extension was not in the skin, fascia, or tendons but in the joint capsule and articular ligaments. The authors believe that most of the failures in the operations for congenital finger contractures are due to non recognition of this factor. In their case full extension of the fingers was obtained after partial division of the capsule and ligaments. The operative findings are described in detail. A simple apparatus to maintain extension was devised and employed for several weeks. The final result was excellent and the authors believe results should generally be successful if their plan for operation were carried out.

Three stages of congenital finger contracture are recognized. In children the drooping of the phalanges can be permanently corrected by extension apparatus. The second stage, generally observed near puberty, consists in a contracture that can be overcome without operation only with great difficulty. In the third stage the affection has progressed and can be cured only by operation. The contracture not infrequently remains stationary in the first stage. Dupuytren's contraction of the fascia bears no relation to congenital finger contracture.

Fraser F R: Clinical Observations on Ninety Cases of Acute Epidemic Poliomyelitis. N Y M J 914 c 11

By Surg. Gynec. & Obst.

In a study of ninety cases of poliomyelitis admitted in the acute stage to the Rockefeller Institute the author observed that the ages were from nine months to fourteen years, that the paralytic and general symptoms subsided, stiffness, droopiness, twitching and irritability came on from a few hours to nine days before the paralysis, that onset occurred in 10 to 50 per cent and posthock in 50 per cent but convulsions occurred in only one case. Tenderness on handling was noted in 67 per cent of the cases. Paralysis of the respiratory muscles was present in 33 per cent and 1 of the 13 fatal cases, death was attributed directly or indirectly to this cause. About 33 per cent showed



involvement of the facial muscles. Five cases of the abortive type are reported in which there was present all the characteristic symptoms except paralysis. Electrical tests made on 11 patients seemed to indicate that paralyzed muscles which respond well to faradic stimulation will recover. After a year of unsuccessful treatment recovery of a completely paralyzed muscle cannot be expected. Treatment during the acute stage may include the administration of urotropine and intraspinal injection of adrenalin. Neither of these measures was found to be of definite value. Artificial respiration in cases of paralysis of the diaphragm and inter-

costal musculature has not accomplished any recoveries. Care should be taken to make the patient comfortable and to prevent toe-drop by supporting the foot on a right-angle splint. After the acute stage the important points in treatment are massage and prevention of deformity. It is doubtful whether electricity is of any value beyond causing contraction; it may supplement massage but cannot replace it. The occurrence of deformities is to be prevented by resisting the relatively strong muscles with mechanical appliances thus allowing the weaker muscles to relax which condition hastens the recovery.

W. A. CLARK

## SURGERY OF THE SPINAL COLUMN AND CORD

Jacobs, C. M. Bone Transplantation into the Spinous Process of the Vertebrae for the Cure of Tuberculous Spine Disease. *Ill. V. J.* 19:4:2271-8. By Surg. Gynec. & Obst.

The writer reports nine cases of Pott's disease treated by the Albee method of transplanting a plant from the crest of the tibia into the split posterior spinous processes.

While recognizing that this procedure marks a new epoch in the treatment of tuberculous disease of the spine the author does not think it justifiable in all cases and sums up the indications as follows:

In children with caries of the cervical lower dorsal and lumbar vertebrae conservative treatment should be the first resort. In the iliac and upper lumbar

Pott's disease or where conservative treatment has been tried with disappointing results Albee's surgical method is the treatment par excellence.

In adults where time plays an important part and where rapid results are desired surgical treatment is the method of selection.

To avoid failure the graft should include the spinous processes of all of the diseased vertebrae and at least two contiguous vertebrae above and below. A good skiagraph is therefore most essential. External support is advisable for 6 to 12 months following the post-operative period of recumbency as too early reliance cannot be placed on the strength of the graft and it is best to give ample time for complete union.

J. J. GARNETT

## SURGERY OF THE NERVOUS SYSTEM

Gerulanos, M. Gunshot Injuries of the Peripheral Nerves in the Balkan Wars. (*Chirurgische der peripheren Nerven*). *Deutsche Zeitschrift für Chirurgie* 1914, 104, 1-11. By Zentralblatt für Chirurgie. Göttingen.

Of 2522 wounded men received at the 1st Id. Hospital in Salonika during the battle field 36 had nerve injuries and 50 had lacerations. Gerulanos operated on 30 in Salonika and 4 at Athens together on 50 nerve injuries. He also had 8 cases that were not operated. The region of the hand of the elbow is especially frequent. Of the then follow injuries of the nerves of the upper arm. The sciatic nerve seldom injured. The peripheral region is more often injured on the left side than the right and upper arm region on the right. In comparison with the peripheral nerves were seldom injured probably because they are close to the bullets.

In part of the greater number of brachial plexus especially in the second war he saw 17 cases of injury of the brachial plexus. The shot may pass through the shoulder joint particularly. The nerves may be torn or crushed by the hot or injured secondarily by aneurysms from

fractures or pressure from scars. Injury to the nerve in conjunction with aneurysm or other injury to the vessels is very frequently observed in the lower plexus. The nerve may be very severely injured by a growing aneurysm. Other disturbances may be caused by blood or lymph effusion by infectious inflammation or by a foreign body. Even the simplest effusion of fresh blood or serum fluid into the tissues may interrupt nerve conduction.

Pathological anatomical findings as well as the clinical signs of nerve injury are discussed. Operation should be performed if there is no improvement after 4 to 6 weeks. Resection of the nerve should be thorough and carried out under the strictest asepsis. The operations are reunion of the divided ends of the nerve, stretching, plastic operations, substitution of catgut, lateral implantation, etc. The results of the operation were: cured 14, m. l. edly improved and unaffected 1, freed from adhesions the nerve function gained 13, m. l. the case when it was sutured after 6 to 8 months. With disease recovered without operation.

Sixty-eight cases in total are given.

C. E. G. &amp; F.

Borchard: Surgery of Peripheral Nerves (Frisch-  
pelles zur Chirurgie der peripheren Nerven)  
B f s M Ch 10 4, 20 634  
By Zentralbl. f d ges. Chir u. i. Grenzgeb

Borchard reports the treatment of injuries of the peripheral nerves, which he has practiced for 15 years. As to the time for surgical interference in subcutaneous injuries of the nerves unaccompanied by fracture he operates when the signs of injury to the soft parts, chiefly effusion of blood have disappeared and when during this time there has been no improvement in motility—improvement in sensation does not have much significance—and when neuralgic symptoms or pronounced reaction of degeneration appears.

Often on operation it is found that there has been no interruption of continuity of the nerve but the nerve sheath is somewhat swollen and filled with small extravasations of blood and lymph and the nerve itself injected and reddened. The nerve sheath is always incised even when palpation shows no marked change. Later it is sutured again and to avoid adhesions the nerve is embedded in muscle. If the nerve injury is complicated by a bone fracture he generally waits for consolidation. If there is an open wound and it is aseptic the nerve is immediately

carefully cared for. If it is septic he waits for the cleansing of the wound. In secondary nerve lesions from callus, scars, aneurysms etc. he operates on the first certain signs of beginning injury.

As to the technique of nerve operations, he demands that normal nerve tissues should be brought into contact, and that the nerve be freed from pressure and protected from later pressure from scars. The freshening of the nerve stump must be carried back until nerve fibrils can be detected. Often longitudinal incisions must be added to transverse resection in order to free the nerve from the surrounding scar. Defects from cicatricial resections are to be compensated for not by stretching but rather by flexion of the neighboring joints and by bone resections. The best of the plastic methods is the implantation of both stumps into a sound nerve. It is very important to embed the place of suture to avoid pressure from the scar. Borchard prefers two muscle flaps made from two neighboring muscles with pedicles so that their nutrition and innervation is not interfered with. They are wound about the nerve in such a way that the injured surface is turned away from the nerve.

In the after-treatment the avoidance of contractures must not be neglected. Wasm.

## MISCELLANEOUS

### CLINICAL ENTITIES—TUMORS, ULCERS, ABSCESES ETC.

Boenigk Id, H. Attempts at Immunization against Mouse Cancer (Über Versuche zur Immunisierung gegen Mäusekrebs). Zentralbl. f. Bak. i. allg. Path. 9 4, 20 634  
By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb

The tumors to be used for immunization were prepared by the method recommended by Pohl and Wuechoh. They were crushed on a sterile glass plate with a spatula and the plate dried either in a vacuum or at room temperature. After 24 hours the mass was scraped off the base tumor powder dissolved in sterile salt solution and used for immunization. Increasing doses were injected into mice and protection was always produced against a succeeding inoculation with completely virulent tumors. This protection extended over several weeks, and caused at least an inhibition of growth of the tumor as compared with those in control animals lengthened the life of the animals vaccinated and often caused retrogression of tumors. Control experiments showed that normal organs prepared in the same way caused no protection against inoculation with tumors. C. L.

Crile, G. W. The Two-Stage Operation Especially in Its Relation to Treatment of Cancer. A. M. S. J. Phila. 9 4, 15 57. By S. R. G. G. G. G. G.

Crile stresses the importance of availing oneself of the recent developments in surgical technique

through which the margin of safety of the patient may be raised. Patients exhausted by cancer and acute infections should be associated and gain the benefit of the two-stage operation.

The patient who has been previously associated has not the same fear of operation nor has his vitality been lowered besides his ability to stand further operation is raised.

Crile discusses methods adopted by him in cases of cancer of the rectum, stomach, cervix, larynx, to give and acute abdominal infections.

The mortality in cases of cancer of the rectum is lowered by a previous colostomy. Crile reports 16 cases without a death.

In cancer of the stomach a preliminary gastroenterostomy followed by resection in two weeks is advocated. In cancer of the cervix at the preliminary operation Crile advocates extensive cauterization to prevent implantation by the cutting method. The following day an abdominal hysterectomy is performed.

In cancer of the larynx at the first stage the deep planes of the neck are exposed and packed with iodoform gauze to prevent mediastinal infection and the vagus on one side is exposed and its environs packed with gauze to prevent vagitis. At the second operation the larynx is excised. Twenty-eight cases have been performed: two times with but a single death.

In cancer of the tongue the danger of pneumonia and infection of the neck are lessened by preliminary

cautization of the growth and a secondary excision of all of the glands of the neck whether they are enlarged or not.

In acute pelvic abscesses preliminary vaginal puncture is advocated in acute appendicitis with a strongly walled-off abscess, simple drainage is the method adopted unless the appendix is easily located drainage of the gall bladder in critical cases of acute cholecystitis the cholecystectomy being reserved for the time when the storm has passed.

In exophthalmic goiter ligation is performed in bed.

ISIDORE COHN

Powers, C. A. Systemic Blastomycosis. *J. Surg. Phila.* 1914 12 815 By Surg. Gynec. & Obst.

Powers reports two fatal cases of systemic blastomycosis. The author wishes to emphasize (1) the fatal character of the disease and (2) the necessity of early wide excision of the local focus. He credits Busse 1894, with having first made detailed observation of the disease.

The infection usually enters by way of the skin and is transmitted through the lymph channels. The course of the disease is usually slow, anemia, progressive emaciation, simple mycosis, and albuminuria characterize the disease.

The first case a male aged 42 with a previous history of pneumonia at 10 was at the age of 23 afflicted with a bronchial cough lasting one year. At 32 he noticed two lumps, one above each clavicle they gradually enlarged and were removed 3 months later. The sinuses he led slowly. Similar lumps appeared and were removed in 1902 and 1903. In 1906 he had an attack of jaundice lasting three months. In 1910-11 more lumps appeared below the jaw on either side. In June 1913 Powers saw the patient. At that time the neck was filled on both sides with multiple hard lumps, presenting multiple sinuses. Radical operation on both sides was performed. The clinical diagnosis was tuberculosis. No histological examination was made. Two weeks later soft lumps appeared on the abdomen and thighs and were excised. In 1911 cultures from one of these abscesses gave pure blastomycosis. The patient died from exhaustion April 10, 1912.

The autopsy showed multiple milium abscesses of the liver, shopsoas abscess of the spleen, milium abscesses of the pelvis of the left kidney — acute fibrous pleurisy.

The lesion is found macroscopically everywhere essentially alike the differences being apparently due partly to the stage of development of the individual lesion. The main features of the disease process can be reconstructed in considerable detail.

The organism lodges first in small vessels or capillaries. The endothelial cells proliferate becoming large and plumper and separate from the wall. Later they may fuse about the organism to form a typical giant cell of the Langhans type. The vessel is occluded and the vessel wall disappears leaving a collection of endothelial cells. This

collection enlarges encroaching on the surrounding parenchyma which disappears leaving a supporting connective tissue stroma and capsule. The connective tissue also increases to some extent and may organize the lesion replacing it by scar tissue. In the earlier stages of the lesion there is more or less infiltration by leucocytes among which plasma cells and eosinophilic myelocytes are a striking feature which serves at once to distinguish the process from tuberculosis. Somewhat later the cells of the lesion undergo a widespread and uniform coagulation necrosis similar to the type commonly met with in rapidly growing malignant tumors and differing from caseation in the fact that the structure of the cells can be recognized for some time after necrosis has taken place. Lesions as large as 1 to 2 cm. in diameter may consist of a capsule surrounded by a narrow zone of leucocytes and small daughter lesions and containing a pasty mass of necrotic cells with little or no living tissue. Ultimately the dead tissue is extensively infiltrated by polymorphonuclear neutrophils the disintegration of which with the resulting liberation of proteolytic ferments is doubtless responsible for the liquefaction which occurs.

ISIDORE COHN

Ohlenschitz, L. Reciprocal Relations of Some Glands with Internal Secretion. (Über die gegenseitigen Beziehungen einiger Drüsen mit innerer Sekretion). *1. Abh. f. Gyn. u. Geburtsh.* 1914 Bd. 333. By Zentralbl. f. d. ges. Gynak. u. Geburtsh. u. Grenzgeb.

The author has tested the effect of hormones clinically and experimentally. Young rabbits those two months old and older ones that had given birth to young were castrated, some of them were then kept as control animals and the others injected with extracts of various organs—biovar and ovarin, the secretory product of the whole ovary, propovar that of the follicular apparatus alone, luteovar that of the corpus luteum, chorionin that of the placenta and mammin that of the mammary gland.

The following were the effects of the extracts injected. Atrophy of the uterus was caused by castration in the young as well as in the sexually mature animals; this was overcome by biovar, ovarin and propovar; it was not affected by luteovar, was even more decidedly affected by chorionin, but was seemingly increased by mammin. There is an increase of colloid in the thyroid gland after castration, probably less from increased glandular activity than from delay in the discharge of blood and lymph; this was decreased by propovar, not affected by luteovar, but mammin caused increased glandular function and increase of colloid. Both microscopical and macroscopical changes in the adrenals were inconstant. In the hypophysis the effect was no effect on the posterior lobe. In the anterior lobe there are normally the most eosinophils, then basophils and last basal or chief cells. The chief cells were increased by castration, on the injection of chorionin there was a

marked increase in the eosinophile cells not as would have been expected in the chief or pregnancy cells.

From his experiments the author concludes that the ovarian hormones are produced by the follicular apparatus not by the corpus luteum and for the most part by the membrana granulosa. Moreover the products of secretion of the follicular apparatus act in conjunction with those of the uterus they act antagonistically with chorionin with reference to the thyroid as to the anterior lobe of the hypophysis the chief cell are synergists the eosinophile cells antagonists of the follicular apparatus. He thinks the corpus luteum: a gland with negative internal secretion it neutralizes toxins circulating in the organism. The results of his experiments confirm his clinical hypotheses viz that diseases due to hypofunction of the ovary such as amenorrhoea infantilism and sterility can be successfully treated with proprovar those caused by hyperfunction of the ovary as menorrhagia and osteomalacia with luteovar and also those caused by hypofunction of the corpus luteum such as the pernicious vomiting of pregnancy toxicoses of pregnancy and eclampsia. MOVINAW

tending to produce post-operative complications as pneumonia etc

Crie has noted that since using the anoci technique the operative mortality has fallen from 4.2 per cent to 1.9 per cent and 0.8 per cent in the last 1,000 operative cases. EUGENE CART

### SERA VACCINES AND FERMENTS

Stresemann. New Studies of the Specificity of the Abderhalden Ferns at Reaction (Neuere Untersuchungen über die Spezifität der Abderhaldenschen Fermentreaktion) *Monatsschrift für Geburtsh. Gynäk.* 19 4 5 685

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In 68 cases examined carefully according to Abderhalden's latest directions there were only five failures that is five women that were certainly not pregnant reacted positively with placenta. The author thinks this was due to errors in technique and he is convinced of the specificity of the reaction. REICHMAN

Lange C.: Experiments with Abderhalden's Diastase (Erfahrung mit dem Abderhaldenschen Diastase-Präparat) *Deutscher Arzt* 914 12, 193

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In describing the preparation of the placenta the author states that placentas from diseased individuals should not be used as they may give rise to erroneous results and, so far as possible, placentas should be rejected that come from individuals with albumin in the urine as well as placentas that show numerous infarcts.

To avoid the loss of chorionic villi he recommends that the placenta be not rubbed in the mortar too long. He uses Latapie's maceration apparatus which makes a fine emulsion of the placenta. Before maceration as much as possible of the connective tissue is removed. The loss of specific substance can be avoided by filtering the water in which it is washed a point to which the author attaches great importance for if it is not taken into consideration negative results may be obtained even in advanced pregnancy. Only physiological salt solution should be used to remove the blood from the placenta if tap water is used the haemoglobin may be washed out of the erythrocytes while the stroma remains.

Experiments showed that the stroma acted toward sera that catalyze blood cells just the same as to the entire blood-cells. The author does not believe that the method proposed by Abderhalden for testing an organ for freedom from blood is practical in fact it may be possible to make an organ absolutely free of blood—that is free of the bodies of the blood cells. He calls attention to several points regarding boiling especially to the insufficient state of coagulation of the albumin. On further boiling with distilled water more albumin is constantly being dissolved and with sufficient concentration a positive emulsion solution may be

Cooke, A. B. The Prevention of Surgical Shock and Post Operative Pain *J. Am. Med. Ass.* 19 4 1211 1777

By Surg. Gynec. & Obst.

Cooke states that it is the consensus of opinion among both clinicians and laboratory workers that the loss of vasomotor control resulting in the reduction of the blood pressure below safe limits is the chief factor in the production of shock. The question then arises: How may a surgical operation be performed so as to cause the least possible disturbance of the vasomotor function? The answer is: Anoci-association as worked out by Crie. Crie advocates complete hemostasis, dexterity and gentleness.

The principle of anoci-association are:

1. The preliminary administration of one sixth grain of morphine and one one hundred and fiftieth grain of scopolamine and one half hour before operation.

2. The use of nitrous oxide and oxygen for general anesthesia.

3. The complete blocking of the operative field by the infiltration of a solution of 0.25 per cent novocaine.

4. The infiltration of all tissue traumatized which are supplied with sensory nerves with 0.25 to 0.5 per cent solution of quini and a hydrochloride.

Cooke advocates fifth principle namely early opening of the bowels with calomel 0.5 grain 6 doses followed by a purgative in the second day to relieve the gas pains.

Cooke states that ether definitely impairs the defensive powers, lowers the blood pressure two and one-half times more rapidly than nitrous oxide and increases the coagulability of the blood besides

obtained. He also takes up the question of the dialyzing thimbles he does not think that Abderhalden's method of testing them is satisfactory. He criticizes the biuret reaction and recommends the use of more sensitive albumin reagents such as sulphosalicylic acid. In testing for the passage of peptone through the thimbles he recommends the use of 0.1 to 0.3 per cent peptone solution instead of 1 per cent as finer differences may be determined in this way. Neither is it sufficient to test the thimbles every four weeks — they should be tested afresh for every new experiment.

He discusses the method of obtaining the serum the filling of the thimbles with the serum and the effect of added haemoglobin on the outcome of the reaction. It can be shown that the addition of haemoglobin for experimental purposes does not alter the outcome of the reaction. It is difficult to get the same results twice by following Abderhalden's directions. In a test with serum and placenta a stronger ninhydrin reaction does not necessarily show catabolism but it may be due to a summation of non specific components. Neither does inactivation of the serum lead to uniform results as has been shown by experiments with guinea pigs therefore the author does not believe that catabolism is demonstrated by a difference in the ninhydrin reaction in parallel experiments with placenta and active serum and placenta and inactive serum because there are a number of other factors which might produce such differences.

To exclude errors due to the thimbles he tested a number of methods of dealbuminizing. To determine the non coagulable nitrogen the ninhydrin test or Pregl's microkjeldahl method may be used. Dialysis with distilled water is not reliable as with it globulin may be precipitated therefore physiological salt solution must be used. Inaccurate measurement of the 0.1 ccm of ninhydrin solution and the use of non uniform reagent glasses are sources of error.

From his experiments the author concludes that Abderhalden's dialysis in its present form does not always give reliable results. With it he could not determine the specific type of serum ferment in pregnancy and could not find place for the fetus were not catabolized by sera from patients with carcinoma and sarcoma.

BRAHM

Harmer T. W. Remarks upon the Effects Observed in the Use of Mixed Toxins (Coley) in Certain Cases of Sarcoma. *Bos. M. & S. J.* 94: 41-53. By Surg. Gen. & Obst.

Harmer reports his observations made during the past five years on 91 cases. Of these 32 are analyzed first according to the type of sarcoma and the according to anatomical situation and tissue of origin. These 32 were all primary or recurrent inoperable sarcomata or cases in which the disease could not be eradicated at operation. All were proved by microscopic examination. All were under treatment at least three weeks. In each

case the results were free from vitiation by concurrent treatment. All living cases had been seen or heard from within three months most of them within a month.

The average age of all cases was 33.8 years. The average duration of treatment was a little over three months. The average maximum dose was 11.9 minims. The maximum dose was 53 minims.

The author classifies the cases in six groups according to the effect of the toxins: (1) Those in which there was no appreciable effect; (2) those in which growths softened but did not diminish in size; (3) those in which growths disappeared or practically disappeared but returned; (4) those in which growths disappeared but metastases simultaneously occurred; (5) those in which the growth diminished in size but tumor still persisted; and (6) those which were apparently cured in which growths have disappeared and no metastases have occurred.

The apparent cures include: (1) fibrosarcoma of the septum and ethmoid; (2) giant cell sarcoma of the antrum and superior maxilla; (3) large spindle-cell sarcoma of the ethmoid; (4) small round cell sarcoma of the antrum and ethmoid; (5) small round cell sarcoma of the antrum, ethmoid, superior maxilla, posterior septum and nasopharynx; and (6) giant cell sarcoma of the spine. These have remained apparently well since the conclusion of treatment 33 days, 1 month, 3 years, 1 month, 2 years, 2 months, 2 years, 7 months, 2 years, 10 months and 1 year, 11 months.

A pathologic study of two closely lying tumors in one individual one untreated the other treated showed that the treated tumor was apparently destroyed by an inflammatory process and that the action of the toxins in this case must be considered local rather than systemic. In other cases on the contrary in which growths were inaccessible injections at a distance have produced apparent cures. In such cases the action of the toxins must be regarded as systemic.

Harmer concludes from this study that although the determination of the increment of dose and the interval between injections requires some experience even after considerable experience this method of treatment is uncertain. It is so uncertain and so distressing that its use is unjustifiable in any case in which operative measures of reasonable safety offer possible hope of removal. The percentage of apparent cures may be regarded as varying from 9.4 to 8.8. The study suggests that toxins offer no expectation of benefit in cases with multiple melanotic growths and in cases of mixed cell growths. It suggests that they may be legitimately tried in cases with single melanotic growths and that they are apparently of value in cases with sarcoma arising in the nose and accessory sinuses whether spindle-cell giant-cell or round cell. The results of operative treatment of true giant-cell tumors are regarded as successful so that toxins are not advocated. Their use is however considered warranted in those cases such as giant cell tumor of the spine.

in which the growths are so situated that complete surgical eradication is impossible and in these cases he believes that the attack should be primarily surgical followed immediately by toxin treatment.

### BLOOD

Forster G. S.: The Axillary Sup. *S. & G. & Obst.* 1, 4, 21, 218. By S. & G. & Obst.

The idea brought forward is one partially suggested by Lane in his clinic at Guy's Hospital. The system as carried out however prevents a new phase of the principle and broadens the scope of usefulness.

Forster recommends its use in all general surgical work for the purpose of avoiding shock suppling fluid in excessive amount during the operation and practically eliminating post-operative vomiting.

In reviewing general surgical cases carefully tabulated only one case of post-operative vomiting was found and even in this single case the amount was slight.

The principle of the axillary sup is to allow normal salt solution temperature of 100 to flow in unobstructed into the loose tissue of the axilla. The solution is contained in a reservoir placed at a proper height to permit atmospheric and volume pressure to aid the fluid in entering the subcuticular space. The fluid runs down a rubber tube part of which is coiled in a bath containing water kept at a temperature of 100° the cooling material is placed suddenly. This rubber tube divides into two at the ends of which are ordinary hypodermoclysis needles passing the pectoral muscles to the axillary space thus continuous flow is permitted during any operation. Its use should become general.

The amount of fluid injected varies from 40 to 120 ounces. The strictest aseptic precautions are adhered to in every detail. The name axillary sup has been attached to this procedure by the author who sums up as follows:

1. Post-anæsthetic emesis is eliminated.
2. Surgical shock is ruled out.
3. Hypodermoclysis or other stimulation is avoided.
4. Freedom from pain and gas is attained.
5. The dead interval after the operation is absent.
6. A general and full cardiac action is maintained.
7. The Murphy's drug is not a necessity yet should not be forgotten.

b. The patient returns from the operation dry room in better condition than when they enter.  
c. A watery should be kept for obstructed respiration however it will not occur under the treatment.

Satterlee H. S. and Hooker R. S.: The Further Development of an Apparatus for the Transfusion of Blood. *S. & G. Obst.* 1, 4, 215. By Surg. General & Obst.

The authors describe a method and apparatus for direct transfusion of blood through the agency of an intermediate receptacle which is the practical out-

come of previously reported experimental work. A thin walled gold cannula having a snugly fitting obturator is used in the donor's vein. The cannula with obturator is introduced through a small incision in the vessel wall and this serves as a protective sheath through which when the obturator is withdrawn the metal tip of a paraffin-lined pipette is inserted directly into the blood stream of the donor without coming in contact with the wounded vessel wall. The blood is removed from the donor in the manner the pipette having a capacity of 100 ccm., and is carried to the recipient where it is delivered through another cannula of somewhat similar construction. Both the donor's and the recipient's cannulas are connected by means of a lateral arm with a reservoir of physiological salt solution so that their interiors are automatically filled with an overflowing stream of the salt solution during the brief intervals required for shifting the obturator for the pipette or vice versa. This prevents the blood in the vein from entering the cannula, prevents the possibility of air embolism and at the close of the operation provides a ready means of infusing salt solution into the donor's circulation to replace the blood which has been taken away.

- The advantages claimed for the method are—  
1. The liberation of thromboplastic substances in the carried blood is minimized by preventing disintegration of platelets through friction and contact with movable parts, ign. surfaces, and by preventing contamination from wounded tissue.  
2. The preparation of the donor's and recipient's blood vessels with cannulas is simple so that a successful transfusion of blood is practically assured in all cases.  
3. The possibility of its employment in an emergency by a single operator.

4. It provides an ample margin of safety in the coagulation time of the carried blood in long lasting unnecessary delay allows the donor and recipient to be separated to rooms desired.  
5. The apparatus is adapted for use either with paraffin or with kerosene as an anticoagulant. By the first method only minimal amounts of this substance are required the effect being obtained by simply wetting the interior of the pipette with a solution of kerosene in salt solution and pouring off the excess of this fluid just previous to use.

### BLOOD AND LYMPH VESSELS

Philipowicz, J.: Röntgen Treatment of Tuberculosis of the Lymph Glands (Beiträge zur Kenntnis der Lymphdrüsen-Tuberkulose). *Monatsh. f. Chir. u. Gyn.* 1907, 36, 1, 1-10. Zentralbl. f. d. ges. Chir. Grenzgeb.

Philipowicz operated at Königsberg a limited number of cases of tuberculosis of the lymph glands treated with roentgen rays and confirms the already well known favorable effects of this treatment on the local as well as the general condition. He has found the following technique the best. He uses a water-cooled tube 13 mm. distance from the

num filter 2 to 3 mm thick if the skin is very sensitive a filter of tinfoil on paper is also used. The soft rays are excluded. One erythema dose was given at each sitting. The hardness of the rays was 8 to 10 Benoist. As a general rule the intervals were 8 days if there was pain at the diseased site the intervals were lengthened to 14 to 21 days. Skin reactions were never observed. On an average 15 treatments were necessary making the duration of the treatment 4 to 5 months.

According to the author's experience roentgen treatment should become the predominant treatment for tubercular lymphoma and should come into much more general use than it is at present.

AMSTAD

### ELECTROLOGY

Holmes, G. W.: Some Experiments in Standardization of Dosage for Roentgen Therapeutics. *Am J Roentgenol* 19 4 205

B. Surg. C. nec. & Obst.

The author being unsatisfied with present methods of measuring X-ray dosage has conducted experiments to determine whether the chemical and biological effects of the X-ray bear a fixed relation to the amount of electrical energy put into the tube. He used an apparatus giving a non-fluctuating and measurable voltage of any gradation between 10 and 80 kilo volts. The attempt was to find the required electrical energy at the tube terminal which would produce an erythema of the skin at a known distance in a known period of time. He found this energy to be the same for all tubes having target of the same material regardless of the accumulation of the tube. Also it is immaterial whether the energy is produced by a high voltage and low amperage or vice versa the wattage being the factor which determines the dose. Thus the author found the same chemical and biological effect of distance with 40 kilo volts and 5 amp as with 80 kil volt and 2 amp at the same distance and for the same period of time. This is in direct contradiction to accepted opinion as it is generally believed that an erythema will be produced quicker with low vacuum tube than with a high vacuum tube milliamperage distance and time of treatment being the same. The author produces an erythema of the skin with his apparatus tube at distance of 10 inches from the skin in 3000 kilo volt milliamperage-minutes. The result is practically the same whether the voltage is 1000 or 3000 volts. The penetration of the rays given off is of course different for each reading.

Comparisons were made between the author's method of measurement and the Sabouraud pastille. The latter was found to be less than a dose when low voltage was used and more than a dose when high voltage was used. The author emphasizes the well known fact that the Sabouraud pastille is only accurate for the best of medium penetration, 6 to 7 Benoist. The author concludes that the results obtained by his method seem more accurate and easily applied than any other. W. W. GAZZ.

Abbe R. The Efficiency of Radium in Surgery. *Ohio St M J* 1914 x 461

By Surg. Gynec. & Obst.

Abbe gives his estimate of the efficiency of radium treatment after eleven years experience. He believes that radium is not a destructive but a constructive force and he says of it. This is a stimulating force recognized first in its effect on plant life and later brought into use to explain some of the phenomena of its influence on tumors.

The facts are (1) Radium retards seed growth. (2) Radium represses animal life as shown by experiments with worms. (3) Radium causes irritative spinal meningitis in mice. (4) Radium causes the disappearance of epitheliomata of the face. (5) Radium technique is exceedingly varied and not standardized. (6) Radium (and roentgen rays) cures skin epitheliomata while surgery only removes them. (7) Radium cures the disease whereas surgery only cures the patient.

The selective action of radium is proved by results in treating—

1. *Myeloid sarcoma*. Of this Abbe has cured cases some of which had been previously treated by Roentgen rays without result. The tumor disappeared under radium treatment.

2. *Rodent-cell sarcoma of the parotid gland*. He cites a case of a tumor the size of a man's hand which was cured by the insertion of a silver tube containing 100 mg. radium, through the tumor in two places the tube remaining in place eight hours in each place. The tumor was removed in three months all but the thickness of a silver wire which showed a remnant of the tumor cells entirely inert in the fibrous stroma.





that metastases in the glands seemed to be specially adapted to irradiation because they offer particularly favorable conditions for autolysis.

SPALITZER, of Vienna has treated a large number of cases at the Vienna general hospital with roentgen rays alone and points out that only large doses are successful. Operable tumors should be operated on.

HEYSSER of Jena reported favorable results of radiotherapy in two cases of sarcoma.

TILLYMAN of Cologne thinks it doubtful whether the effect of the rays is elective as different kinds of carcinomata react very differently to the rays.

MÜLLER, of Rostock proposes to follow the old custom of peaking of a carcinoma as cured only when it has been free from recurrence for five years.

KROVIC of Freiburg pointed out that gynecologists treat operable cases also with radium and roentgen rays and that operable cases may be rendered operable by radiotherapy. He reports successful results and prefers roentgen rays.

WERNER of Heidelberg reported 256 cases of carcinoma treated with mesothorium. In superficial carcinomata there was improvement in 88 per cent in deep tumors in 40 per cent. Among 37 cases of carcinoma of the stomach 3 remained well for longer than a year after deep irradiation. Of 17 cases of carcinoma of the esophagus 10 cases were improved for more than six months only one for longer than a year.

HEIMANN of Breslau reported 4 inoperable cases of carcinoma of the uterus treated at the Breslau clinic and described the technique in use there. They use a combination of high doses of roentgen ray and mesothorium. Also in inoperable cases of carcinoma of the cervix which were prepared for operation by irradiation the putrid discharge was stopped. Therefore the prognosis of this treatment has become better.

WARNEKROSS of Berlin reported that in Bumm clinic as they did not have the necessary amount of radium for successful radium treatment at large dosages of roentgen rays were used with good results. Even with large doses there was no skin burned.

KLAUSE of Berlin stated that in Beck clinic prophylactic roentgen treatment after operation was used with especially good result in carcinoma of the breast. In two cases there was recurrence at a place the rays did not touch.

PERTHESS of Tübingen reported a case of carcinoma of the lip cured by roentgen rays in 1904. It has been under observation for more than five years and there has been no recurrence.

HEIDENHAIN of Worms stated that in his opinion there is a great difference in the biology of the different kinds of carcinoma and the good results obtained in one kind of carcinoma cannot be assumed to follow in other kinds. For example in autopsies on women who have died of carcinoma of the uterus it has been found that in third of the cases there were no metastases. Perhaps that is why the gynecologists have reported such good results from radiotherapy while in 97 per cent of

the cases of carcinoma of the mammary gland there is involvement of the glands of the axilla and generally an infection of the entire mammary gland and of the lymph vessels traversing the pectorals. In these cases only radical operation is effective.

LOV FISLSBERG of Vienna also pointed out the necessity for amputation of the breast in even the smallest carcinoma.

KATZE STEIN

## MILITARY AND NAVAL SURGERY

Sanitary Service and Military Surgery on the Hospital Ships during the Campaigns in Libya and Agaa (Il servizio sanitario e la chirurgia durante la campagna di Libia e d'Agaa sulle navi ospedaliere e negli ospedali dipartimentali) Roma Ministero di marina, 1911

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

The two hospital ships The King and The Queen of Italy were most thoroughly prepared for the treatment and transportation home of the sick and wounded. The operating rooms were models—roentgen cabinets, bacteriological laboratories, etc. being provided. Some of the wounded were brought on board immediately after battle some a few days later so that the ships served as places for the first dressing of wounds and also as field hospitals.

Four hundred wounded men were treated on the King of Italy and while it would be impractical to go into the details of the histories of the cases the following points brought out by Chief Surgeon Rosati may be mentioned. Only tincture of iodine, hydrogen peroxide and ichthyol glycerine were used as antiseptics.

The treatment of wounds was extremely conservative even when there was extensive destruction of bone. Among the 400 cases there were only three amputations, and the results were excellent. Gunshot injuries of the skull according to Rosati cannot be operated upon quickly enough in perforating injuries of the thorax all operation is contra-indicated and in gunshot injuries of the abdomen, laparotomy should as a rule not be performed because severe cases cannot be operated upon soon after the injury on account of shock and slight injuries get well without operation. The question of laparotomy must be decided in each individual case.

On the Queen of Italy 323 wounded men were treated. The results here too were excellent and the surgeons Vaccari and Crespi followed the same general principles as Rosati. Operation should not be performed in hemothorax unless there are alarming symptoms such as compression of the heart or lung on both sides in bilateral injury puncture is particularly to be avoided.

The authors also believe that operation should not be performed in gunshot injuries of the spine as it does no good. The prognosis is bad also in perforating abdominal injuries. Only Italian soldiers were treated and the wounds were inflicted by the lead bullets (Mauzer) of the Arabians. The injury to the soft parts is greater with these bullets than with the modern jacketed bullets.

HIZANTO.

# GYNECOLOGY

## UTERUS

**Poucher J W** Two Cases of Advanced Cancer of the Uterus, Apparently Cured by Post Operative Infections. *Tr Am As Obst & Gynec* Buffalo, 1914 Sept By Surg Gynec. & Obst

Poucher reports two cases of adenocarcinoma of the uterus in which the disease had advanced until the uterus was soft and broken down and it was found impossible to remove all the affected parts. In both cases operation was followed by profuse sloughing and suppuration. Both cases recovered and have remained well since—one six years and the other two years.

**Dobbert T** Results of the Treatment of Cancer of the Uterus with Radium (*Ergebnisse der Behandlung des Gebärmutterkrebes mit Radium*) *St Petersb med Zisch* 1914 XXXIX 97 By Zentralbl. f. d. ges. Gynaek. u. Geburtsh. d. Grenzgeb

In the course of 4 months 44 cases were treated with radium among them 31 of cancer of the cervix. The irradiation was accomplished with three tubes containing 53, 45 and 58 mg radium bromide. The filters were gold brass lead aluminum and silver capsules. The greatest period of application at one time was 24 hours. The total duration of application was 6000 to 1000 milligram-hours. Of the 31 cervical carcinomata 18 were inoperable, 7 barely operable, and 6 operable. Subjectively there was marked improvement in the general condition. Objectively there was rapid disintegration of the cancerous masses in the most part without loss of blood. The infiltrations in the pelvic cellular tissue were less favorably influenced. In only one case was complete disappearance of the infiltration observed. Microscopically the characteristic structure of carcinomata was no longer found after irradiation but there were groups of non-viable cancer cells of varying sizes. The treatment of some of the cases is not yet closed.

The author draws the following conclusions from his experience: (1) Beginning cervical carcinoma may be treated by radium before operation. (2) In advanced cases because of the uncertainty of adjuvant, radical operation is to be preferred. (3) In operable cancers the best field for radium therapy. (4) Very far advanced cases are not adapted to radium treatment. DOK.

**Perry J F** The Treatment of Inoperable Carcinoma of the Uterus by Application of Heat. *Med Press & Circ* 94 By Surg Gynec. & Obst

The author discusses the work done by various experimenters in the use of heat as an agent to

destroy cancer-cells. If what Vidal and others say is true it is a rational procedure to attack cancer with heat. Percy suggests a practical system of applying heat in otherwise inoperable carcinoma of the uterus. The penetration of heat by this method can be definitely though perhaps crudely determined and regulated. Where the malignant process is at all accessible the method has almost no limitations. The required apparatus is not only easily carried but is also inexpensive.

Percy uses an electric heating iron which is perfectly regulated by means of a rheostat. With this iron and his water-cooled speculum and vaginal dilator a maximum penetration and dissemination of heat are obtained in the involved structures. More than this, the low degree of heat which his experiments show to be more effective than intense heat can be maintained accurately. This degree of heat does not burn up the cancerous mass, but merely makes it so hot that the hand of the surgeon encased in a medium weight rubber glove cannot hold it. When this degree of heat is reached and maintained for from ten to twenty minutes the cancer-cells are absolutely killed while the normal tissue-cells are not injured. The important thing is not to convert the tissue into charcoal. The charcoal thus formed inhibits a further dissemination of heat not only through the cancer mass but beyond. Moreover drainage is prevented for a number of days. This permits the absorption of a larger quantity of broken-down cancer cells than the average of these patients can tolerate many of them die as a result of this mistaken method of applying heat.

The heating iron when used through the water-cooled speculum, should not be hot enough to scorch a pledget of white cotton if laid on the heating iron even for half an hour. No smoke and no smell of burning tissues should issue from the speculum, as would occur if they were being carbonized. The ear placed near the speculum should hear only gentle sizzling or bubbling while the heating head is in the diseased mass.

Cancer is destroyed when the temperature of the mass is raised to 50 to 55°C while the vitality of normal tissues is not changed until the temperature exceeds 55 to 60°C. The basic idea then of this treatment is not cauterization but the production and dissemination of heat in the gross primary mass of cancer.

The author states that it is not always best to attempt to destroy the entire mass of the carcinoma. If strongly diseased, not the use of the curette or other operator is assured for the reason that the heat is introduced through the

medium of the pathological overgrowth Heat does not encourage the extension of metastases while the curette and knife do Again scar tissue is not formed after the use of the curette but it is the usual sequel after the application of heat The author has yet to observe the redevelopment of cancer in cicatricial tissue No statistics are mentioned as they are reserved for a future paper

EDWARD L. CORNELL

Childe C. P. Abdominal Panhysterectomy for Carcinoma of the Cervix Uteri *Bull J S G* 1914 19 By Surg Gynec & Obst

The only objection that can be urged against Wertheim's operation and the only point in which it compares unfavorably with vaginal caesarean section is in its primary mortality This of course is important At the same time in a disease so certain to return unless completely eradicated it is worth while running an increased primary risk for an additional chance of cure The author believes that it is only a matter of time, work and experience to bring down the primary mortality of abdominal hysterectomy very nearly if not quite to that of the vaginal operation The author describes an operation with the object of reducing the primary mortality It is a modification of the Wertheim operation

As a preliminary each case is examined under an anesthetic the cervical canal being dilated if necessary to locate the cancer The motility of the uterus the infiltration along the parametrium the implication of the bladder and rectum and the wisdom of recommending the operation are thus ascertained A portion of the growth is obtained If a growth is found in the sigmoid it is thoroughly curetted and the cavity of the ulcer gone over with the Paquelin cautery

About one week later the second operation is performed This consists of a vaginal and abdominal stage The base of the ulcer is curetted and cauterized The vagina is dried and painted with tincture of iodine after which it is closely packed The pack is withdrawn late before the vaginal clamp is applied with the result that when the vaginal canal is cut across not a drop of discharge is seen

The abdominal stage is on Wertheim's lines up to a certain point i.e. the ovarian vessels are tied the round ligaments crushed the ureters isolated, and the uterine arteries ligated The bladder and rectum are separated from the cervix and vagina until a couple of inches of vaginal tube are denuded The remainder of the operation differs from Wertheim's The author's clamps are now used Those for the parametrium are strong crushing clamps furnished with broadly serrated blades and curved so that they fit the parametrium snugly at the pelvic wall They have strong, flat looped handles One is placed on each side of the uterus the point reaching the side wall of the sigmoid and pressed so that the parametrium is crushed thoroughly The latter is then cut on the uterine side close to the

bladder. The clamps are left on The vaginal pack is withdrawn and the vaginal clamp similar to that above described applied The vagina is cut across and the uterus removed Paquelin's cautery is then applied to the cut edges The clamps are removed and the peritoneum is closed in the usual manner Four ligatures only are employed one for each ovarian and each uterine artery

The following advantages are claimed for the operation

- 1 It greatly simplifies the most difficult stage
- 2 The parametrium needs no ligatures
- 3 The operation is shorter
- 4 Clamping and cauterizing is a safer hemostatic method
- 5 Cancer cells in the cut edges are destroyed.
- 6 No tissues are strangled in a ligature and the pelvic wound is in an ideal condition for rapid healing

During the past twenty months the author has operated eighteen cases In no case has there been any hemorrhage In the only fatal case the rectum was implicated and was opened during operation The operation was long and the patient died of exhaustion in twenty four hours The post mortem showed no hemorrhage Primary union took place all but two cases, but both patients made good recoveries No vaginal douching was needed.

EDWARD L. CORNELL.

Nagy T: A Sarcoma of the Uterus following Infectious Granuloma (Über ein Sarkom der Gebärmutter entstanden von einer infektiösen Granulombildung) *A h f G* 1914 11

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. Grenzgeb

A short critical review is given of the different methods of classifying sarcomata A detailed description is given of the clinical, microscopical and macroscopical findings in a sarcoma of the uterus, that developed from an old infectious granuloma. In the differential diagnosis between tuberculosis and syphilis, the author decided in favor of the latter because aside from the fact that there was no typical tubercle formation there were more plasma cells than epithelial cells and moreover in the tissue necrosis traces of the tissue structure could be recognized and there were no signs of caseation

After reviewing the scanty literature concerning tertiary syphilitic diseases of the uterus the author comes to the following conclusions

1 Tertiary syphilitic disease of the uterus is characterized by plasma cell infiltration of the muscle-tissue, endovascular and perivascular proliferation Langhans giant-cells and extensive tissue necrosis

2 The glandular epithelium of the uterine mucous membrane may be replaced by many layered non horny pavement epithelium of benign character which can be explained only as having arisen from indirect metaplasia In these processes the syphilitic disease plays only the same etiological

part as any other pathological process that involves disturbance of the tissues.

3 The endovascular proliferation of the intima may undergo malignant blastomatous transformation and tissues may then arise from it that in accordance with the law of specificity in tumor formation present the picture of angiosarcoma.

ALTSCHULER.

Jansen H. Connection between Myoma and Carcinoma of the Body of the Uterus (Über gleichzeitiges Vorkommen von Myom und Corpus carcinom am Uterus) *Petersb med Zt* 4 1914  
2221 111

By Zentralbl. f. d. ges. Gynak. u. G. burtsh. s. d. Grenzgeb.

Statistics show that carcinoma of the body of the uterus is much more frequent in the myomatous than in the non myomatous uterus about three per cent in the former to two per cent in the latter also that the proportion of carcinomata of the body to those of the cervix is much greater in the myomatous uterus. Therefore there must be some connection between myoma and carcinoma of the body of the uterus. The view that has been most held heretofore is that the myoma causes endometritic changes in the mucosa of the uterus which forms a favorable ground for the development of carcinoma the so-called adenoma diffusum was regarded as a characteristic affection of the mucous membrane in myoma.

From a study of the manifold and frequently contradictory histological findings in the older and the more recent literature the author comes to the conclusion that there is no form of endometritis that is characteristic of myoma. In the majority of cases to be sure there was a more or less hyperplastic condition of the mucous membrane but a recent work of Ivase is of especial significance he points out that the hypertrophy of the mucous membrane in the myomatous uterus is, to some extent, a product of the hyperæmia caused by the myoma and the more energetic growth of the mucous membrane because of it but that it is also a part a result of the phase of menstruation at the time the examinations were made. At any rate we must give up the idea of carcinomatous degeneration of an adenoma diffusum caused by the myoma. The only thing that can be deduced from the statistics is that myoma favors the development of carcinoma, because of the hyperæmia caused by the myoma and a chronic inflammatory irritation.

ADOLPH.

Lejars, F. Pyometra and Abscess of the Uterus (Pyomètre et abcès d'utérus) *Sema med*  
9 4 2221 20

By Zentralbl. f. d. ges. Gynak. u. Geburtsh. s. d. Grenzgeb.

Two kinds of abscesses of the uterus can be distinguished those of the cavity and those within the walls. The former are what were originally called pyometra. They are always caused by atresia of the cervix, which may be congenital or acquired. The retained blood or secretion becomes infected. The most frequent causes of atresia in later life are the so-called senile atresias myoma and carcinoma.

Occasionally endometritis may cause obliteration of the cervix because of swelling of the mucous membrane inflammatory adhesions etc. All these forms of pyometra develop very slowly but may reach considerable size and occasionally may rupture into the neighboring organs, or in the worst cases into the abdominal cavity. In old women secondary changes in senile prolapse often cause pyometra. If gas forming bacteria gain entrance pyophyometra follows.

Mistakes in diagnosis are very frequent hence inappropriate methods of treatment are chosen such as abdominal or vaginal total extirpation. Pyometra may appear during the puerperium if so, it is generally in the form of intramural abscesses and in very severe cases may lead to the so-called metritis dissecans. During the puerperium multiple small or solitary large abscesses may be established in the walls of the uterus. Frequently abscess of the uterus is associated with perimetritis or parametritis. Thrombophlebitis of the uterine or hypogastric vessels is a severe complication.

LAOOR.

Noak E. The Pathologic Physiology of Uterine Bleeding *J Am M Ass* 9 4, 1914, 617  
By Surg. Gynec. & Obst.

Novak calls attention to the fact that up to the present time the study of uterine hemorrhage has been almost wholly along anatomical rather than physiological lines. Heretofore, speculation and indefinite conjecture have been the outcome of most of the investigation as to the physiological causes of uterine bleeding.

Following are the most important points in the author's summary:

1 Menstruation—a physiological phenomenon—should be the fundamental starting point in a study of the causes of pathological uterine bleeding.  
2 The factors concerned in normal menstruation are:

a An ultimate cause situated in the ductless gland chain—the ovary being the most important in this relation.

b A nervous mechanism essentially vasomotor in character.

c The pelvic organs particularly the uterus and its lining membrane.

3 The causes of abnormal uterine bleeding may therefore be grouped as:

a Fundamental vital disturbances of the internal secretions.

b Nervous, exerting their effect mainly through the vasomotor nerves.

c Anatomical in which the structural changes are present in the uterus or other pelvic organs.

4 There is good reason to believe that much light will be thrown on the fundamental causes of uterine bleeding by clinical methods of study which are based upon the relations known to exist between the ductless gland apparatus and the vegetative (sympathetic and craniosacral autonomic) nerve system.

HAVER H. MATHURWA.

Kelly H A and Burnam, C. F.: Radium in the Treatment of Uterine Hemorrhage and Fibroid Tumors. *J Am Med Ass* 9:4 Jan 622 By Surg G3 et & Obst

Kelly and Burnam divide pathological uterine bleeding into four groups, as follows

1 Bleeding uteri without demonstrable lesions — the so-called myopathica hemorrhagica

2 Bleeding uteri in young girls — the cause of which may fall into those in group one or three

3 Bleeding uteri from polypoid endometrium

4 Bleeding myomatous uteri

The four groups of cases have received radium radiation according to the technique as planned by the authors and a table of their results for each group is given

From their studies thus far with radium the following conclusions may be drawn

1 In the classes of cases cited radium completely and permanently controls uterine hemorrhage

2 The rays have a specific and direct action upon fibroid tumors, causing them to disappear completely or be greatly reduced in size Furthermore it does not destroy the ovaries

3 Radium can bring about a complete amenorrhea at any age

4 The menopausal symptoms which follow the amenorrhea are absent in 50 per cent of cases and mild in nearly all of them

5 Intra uterine radiation in contradistinction to cervical or vaginal is the method of choice Abdominal radiation in conjunction may add to the rapidity of the results

6 Radium radiation is preferable to surgical procedures in the vast majority of cases If radium fails surgery may have a chance and there can be no harm in the waiting

7 Radium is preferable to the roentgen ray because it is simpler of application acts more rapidly and acts on the uterus with more intensity than upon the ovaries

HARVEY B. MATTHEW

Vered J and Lemaire H: Treatment of Dysmenorrhea (Behandlung der Dysmenorrhoe). *Wkz H m d Ztg* 9:4 Jan 90 By Zentralbl f d ges Gynak Geburth. a. d. Grenzgeb

The author discusses the treatment of the different forms of dysmenorrhea as follows

1 During the attack he gives hot baths 38° to 38.5° for 30 to 40 minutes necessary two or three times in 24 hours rest and bed soothing applications to the abdomen wet hot compresses suppositories of belladonna chloral hydrate or laudanum if indicated treatment of secondary dysmenorrhea every one or two hours

During puberty a simple diet is recommended Fat and highly seasoned foods game mussels sea food coffee and alcoholic drinks are forbidden In many cases ergotherapy advisable ovarian extract and extract of corpus luteum combined

if there is insufficiency of the thyroid with thyroid extract — 0.005 to 0.01 if there is hyperthyroidism and slight insufficiency of the hypophysis with hypophysis preparations.

3 Ovarian dysmenorrhoea in mature women is treated by ovariectomy or resection of the diseased ovaries

4 In women in the menopause apocynum andrographis canadensis viburnum prunifolium pascia erythrina and cannabis indica are used

5 In dysmenorrhoea of uterine origin from aplasia and flexion of the uterus polyglandular treatment massage and pelvic gymnastics are beneficial Sometimes dilatation with laminaria tents is used Sometimes hydrotherapy and thermal baths and sometimes operation are resorted to

6 Membranous dysmenorrhoea is benefited by the insertion of methylene blue powder in the uterus and after dilatation on painting with iodine or curet tage

SCHÄFER.

Kesler H: Is There a Myometrial Gland in the Human Uterus (Ester-il und eine glande myometrial dans l'uterus humain)? *A. n. et B. H. Soc. y d. med. et nat. d. B. n. 1914, LXII 26.* By Zentralbl f d ges Gynak Geburth. a. d. Grenzgeb.

Ance! Boun and other investigators found a so-called myometrial gland first in the uterus of pregnant rabbits then in guinea pigs and in rats and mice Kesler then undertook to find out whether one existed in the human uterus With this in view when performing caesarean section in 7 cases he cut small strips from the uterus along the incision and examined them He found that the modifications in the smooth muscle fibers were similar to those in the pregnant guinea pig's uterus, and that they appeared and disappeared at the same period of pregnancy as in rabbits guinea pigs, and other animals The process of degeneration was a cytolytic

WEIMER

Jacobs: Genital Prolapse (Le prolapsus genitalis). *B. H. Soc. med. d. B. n. 1914, LXII 400.* By Zentralbl f d ges Gynak Geburth. a. d. Grenzgeb

In genital prolapse in agreement with Martin's work the author also distinguishes a suspending and a supporting apparatus and attaches the greatest importance to the ligaments while most authors attribute it to the muscles Rectocele is regarded as a consequence of weakness of the rectovaginal tissue

Defectiveness of the suspensory apparatus is manifested as (a) cystocele and prolapse of the bladder in which a successful operation besides narrowing the vagina must supplement or strengthen the trophic tissue (b) hernia of the vesicouterine pouch and anterior vaginal enterocele in which the operation consists of the pushing back of the excision of the peritoneal sac (c) prolapse of the uterus seldom appearing alone but in conjunction with cystocele anterior and posterior enterocele

and rectocle and (d) hernia in the recto-uterine pouch rarely alone but generally in connection with descent and prolapse of the uterus—in severe degrees there is also prolapse of the posterior wall of the vagina.

3 Defectiveness of the supporting apparatus is manifested as (a) prolapse of the posterior wall of the vagina which is treated by excision and suture (b) elongation of the cervix in which the os is visible in the vulva and finally there is total prolapse metritis and hypertrophy of the whole uterus—treated by amputation of the cervix and perineorrhaphy (c) secondary prolapse of the bladder and uterus in primary failure of the suspensory ligaments—any form of myorrhaphy being generally in vain here on account of the atrophy of the ligaments.

3 Rectocle due to weakness of the rectovaginal septum. In this no method of operation not even suture of the levator can replace lost tissue. Resection of the prolapsed part of the rectum can be tried.

The conclusions are that the chief part of the work of holding the genital organs in place falls on the suspensory apparatus. As both suspensory and supporting apparatus are generally deficient combined methods of operation are indicated.

POWELL

Hance T B: Retroversion of the Uterus, and the Sling Operation. *Ind M Gaz* 94 113 63  
By Surg Gynec & Obst.

The author advocates what is known in this country as the Webster round ligament operation for retroversion from any of the following causes: puerperal inflammatory or mechanical. This sling operation is often combined with shortening of the uterosacral ligaments and the ovarian ligaments.

The puerperal cases may be corrected if recognized within the first six weeks following labor without operation by the use of an Albert Smith or Hodge pessary and uterine tonics as calcium lactate or ergot. Should recurrence take place after a two months trial operation is advisable.

The mechanical cases of retroversion may arise from chronic constipation, a bladder chronically overdistended or some abdominal or pelvic tumor.

Brief case reports of 20 cases helped by this operation done by Bell are given at the end of the article.

ELGERT CARY

Willmoth A. D: Prolapse of the Uterus and Its Treatment. *Lancet* 94 113, 9  
By Surg Gynec & Obst.

Willmoth emphasized the fact that the uterus is not supported and held in place by ligaments, but that it is supported by the entire pelvic floor of which the ligaments are only a part.

The uterus is a balanced organ and can be displaced if the weight of the uterus is increased or the carrying power of the supports lessened or where adhesions cause traction by pulling the uterus backward or by increase of the intra-abdominal

pressure or by sudden force as from a fall causing an acute prolapse. Another class of causes is traction from below as vaginal cicatrices, falling of the pelvic floor abnormally short vagina from any cause and cervical and vaginal tumors.

The descent of the uterus is of three degrees.

The first degree is where the uterus is found in extreme retroversion.

The second degree is where the cervix descends to the vulva.

The third degree is where the uterus protrudes partially or wholly from the vulva.

The development of prolapse is insidious and the symptoms are usually referable at first to other organs as bladder, rectum or pains in the pelvis and extending to the thighs. Menstruation in the first stage is increased but gradually diminishes.

The treatment may be classed under four heads: (1) hygiene, (2) pessaries, (3) general and local treatment, (4) surgical operations.

The first includes proper dress, food and regular habits. The author says that he has had many pleasing results from the use of a properly fitted pessary. He places pregnancy under the head of general and local measures and states that with considerable rest in bed and delivery (6 to 8 weeks) a moderate prolapse may be cured. He also advocates the knee-chest position several times each day.

From an operative standpoint Willmoth advocates an external operation on the round ligaments in young women with a shortening of the uterosacral in a small per cent of the cases. In middle aged women the exact condition of whose pelvic viscera is not known he uses the modified Gilliam operation. In women near the menopause he advises suprapubic hysterectomy with an elevation of the remaining cervical stump.

ELGERT CARY

Jellett, H. Th: Relation of Theory and Practice in the Operative Treatment of Central Prolapse. *Canad M J* 9 14 86  
By Surg Gynec & Obst.

In the past the frequent failure of operative treatment of prolapse has been due to two causes. The first of these is an insufficient anatomical knowledge of the relations and supports of the uterus, and the second is a desire to find a panacea which will be suitable for every case. There are two cardinal points that should be remembered in considering the treatment of prolapse: (1) That the exact lesions present differ to a very material degree in different cases and (2) that any treatment to be successful must follow such lines as enable the operator to alter and modify in details in order to suit the special lesions and complications of each individual case. The knowledge of anatomy is therefore essential. This must be gained not alone in the dissecting room but in the examination of the living.

The vagina is supported below by the levator ani muscles. It is fixed to the pelvic wall by the vaginal suspensory ligament and supported by its

attachments to the cervix and by parts of the endopelvic fascia. The uterus is supported by its vaginal attachments by the uterosacral ligaments and by the different layers of the endopelvic fascia which pass into it laterally and anteriorly. The indirect support of the uterus is the pelvic floor and this is of considerable importance. The author then takes each of these up and discusses them in detail.

Injuries accompanying labor affect both the direct and indirect supports. Deep tearing of the perineum destroys the slight attachments of the levator ani muscles to the central point of the perineum and so allows its lateral band to diverge outwards while actual tearing of the muscle itself destroys the continuity of its inner edge. The result is that the lateral bands are widely separated and there is nothing to prevent the anterior or posterior vaginal wall from bulging directly down through the vaginal orifice. Once the support of the lower part of the vagina is lost there is a tendency for the middle part also to descend because the posterior and lateral walls, instead of resting on the levator muscles, are unsupported and have their pull transmitted directly to the suspensory fascia. The author thinks that this progressive version is seldom seen clinically. What happens rather is that first the lower part of the vagina protrudes then the vaginal fornices lose their support and descend and finally as a result of continued traction the middle portion descends also. The first direct step in uterine prolapse is backward displacement. The weight of the uterus thus transmitted to its vaginal attachments and to the endopelvic fascia both of which are entirely unsuited to resist a direct strain.

Uterine prolapse is the result in most cases of an initial fault which by letting the normal strain to which the suspensory mechanism of the uterus is intended to be subjected throw the elements of that mechanism out of sympathy with one another. This is the most essential point to grasp in planning a successful operation for prolapse because just as the prolapse follows initially a single fault so it will tend to recur after operation if a single weak point is left. Thus it is that entral fixation, vaginal plastic work and hysterectomy have failed. Rational prolapse operations consist of three parts: (1) The restoration of the normal direct support of the uterus and vagina so far as possible. (2) The placing of the uterus in such a position that it offers a maximum resistance to descent. (3) the removal of complications and associated conditions the result of the prolapse. The various methods employed to remedy these defects are discussed.

Jellitt reaches the following conclusion. So long as the posterior vaginal wall is left as it is at present with its supports in an imperfect condition so long must operative procedure be defective. The interspersal operation is excellent in a suitable case but it is incompatible with pregnancy. The restoration of the pelvic floor is, in most cases,

effective but it may again be destroyed during a subsequent labor. The very means adopted to reduce an enlarged uterus to a normal size may subsequently result in producing uterine atrophy and thus remove the most effective part of the modern prolapse operation. EDWARD L. CORNELL

Shropshire L. L. A New Supravaginal Plastic  
Hysterectomy *T. & St. J. Med.* 9, 4, 68  
By Surg. Gynec. & Obst.

The author has noticed that recovery after a hysterectomy was unnecessarily prolonged arrived at the conclusion that the impingement of the nerve trunks supplying the uterus and its appendages within the ligatures used in tying off the adnexa was largely responsible for it. To avoid this slow recovery and to prevent many reflex disturbances which are manifest for so long a time after operation the author devised the following method of procedure.

After the bladder is separated from the uterus down to the internal os the uterus is clamped on either side from the insertion of the fallopian tube to its center at the internal os with a specially devised hysterectomy clamp. Using the clamp as a guide the uterus is transfixed at the points of the clamp with a long sharp pointed knife, bringing the blade out at the fundus at the inner side of the clamp making a smooth cut surface. By drawing the clamps together the two marginal cut surfaces of the uterus are brought in close apposition. With a No. 2 chromic gut suture a needle on either end the suture is started at the points of the clamps by passing one needle between the blades on one side and drawing the suture through to its center then by inserting a needle from either side a saddler's stitch is made until the top is reached, when the

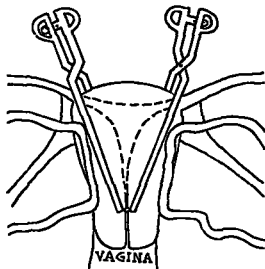


Fig (Shropshire) Showing the clamps in place.

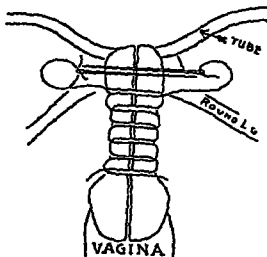


Fig. 2 (Shopshire) Showing the saddle stitch as applied.

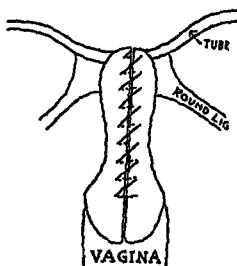


Fig. 3. (Shopshire) Showing appearance of the stump after the running suture is made.

sutures are tied securely. The clamps are then removed and a deep running suture placed on the anterior surface beginning at the lower end of the cut. This is continued over the top of the stump and down the posterior surface to a point opposite the start of the suture. With fine catgut the bladder is fastened to this stump.

The author claims that this operation avoids tying off any of the nerve-trunks or the destruction of any important tissues. It is indicated in any hysterectomy except for malignant degeneration. In cases of fibroid tumors where the special clamp cannot be used the adnexa are caught between rubber covered clamps in a similar manner. In the removal of p. tubes the tubes are separated from the broad ligaments and the clamps applied below them. Another great advantage is that there is much less danger of tying the ureter. In this operation the uterine round and broad ligaments are drawn so tightly across the pelvis that a perfect floor results. (J. A. M. J. C. 1912)

Bumr. The Uterus after Mesothorium Irradiation  
(Uterus nach Mesothoriumstrahlung) (J. A. M. J. C. 1912)  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Examination of the uterus of a woman who had come to the hospital six weeks before with an extensive carcinoma showed that there was marked extension of the ipsilateral carcinoma crater infiltration in both broad ligaments, severe hemorrage and fetid suppuration. After 14,000 mesothorium hours were given the uterus was removed and macroscopically at least no signs of carcinoma could be found. RUGG

#### ADNEXAL AND PERIUTERINE CONDITIONS

Schmincke Ovarian Tumors (Ovarialgeschwülste)  
Monatsh. f. Gyn. u. Gynäk. 1914, 22:11, 230.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Four cases of ovarian tumors are reported as follows:

1. The first case was that of a 70-year-old woman with an ovarian fibroma showing cystic softening.  
2. Bilateral secondary ovarian carcinoma with diffuse cancerous infiltration of the whole uterus, parametrium and the upper part of the vagina was found in a 21-year-old girl with primary carcinoma of the nipple of later.

3. The third case was a bilateral secondary metastatic cancer of the ovary with primary carcinoma of the breast in a 35-year-old woman.

4. Secondary ovarian carcinoma with primary ulcerated adenocarcinoma of the lower part of the sigmoid flexure with lactation of the breasts, and with pregnancy hypertrophy of the hypophysis in a 19-year-old virgin caused death from diffuse peritonitis. In spite of the peritonitis the patient showed marked euphoria until shortly before death. Probably this euphoria had some relation to a metastasis the size of a hazelnut in the marrow of the frontal sinus. Lactation hypertrophy of the breast is very rare in carcinoma of the ovary. It may be assumed that substances are formed in the tumor which act like hormones on the endometrial glands and cause the production of milk in the mammary epithelium. The cancer cells are youthful cells of embryonic character with the production of a secretion that causes correlative hyperplastic development of the mammary tissue as well as changes in the hypophysis. RUGG



Wayer A and Schneider E Disturbance in Function of the Ovary in Myoma of the Uterus and Some Disputed Points in Regard to Myoma (Über Störung der Eierstocksfunktion bei Uterus myom., und über einige strittige Myomfragen) *München med Wochenschr* 914 11 047

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

By the aid of Abderhalden's dialysis the authors attempted to determine whether the anatomical changes in the ovaries in cases of myoma such as increase in thickness, cystic degeneration and angiodystrophy were associated with disturbance in the function of the ovaries.

The blood serum of 30 myomatous patients was tested as to its action on the ovaries of myomatous patients in the same and other individuals as well as on the ovaries of patients with carcinoma, pregnant women and normal women. The ovaries of normal women and carcinoma patients were never catabolized, but of the 22 patients with myoma who were tested with their own serum 20 catabolized their own ovaries. The ovaries of other individuals were catabolized in only 50 per cent of the cases. This shows that as a rule patients with myoma have dysfunction of the ovaries, that there are active ferments in the serum and substances capable of being catabolized in the ovaries, but that these ferments are extraordinarily specific for the ferments of the serum of a patient with myoma which catabolize a certain substance in her own ovary will catabolize the ovary of another myomatous patient only when it contains this same substance.

The authors think that the dysfunction of the ovary is the cause of the pathological growth in the uterus. This seems to be indicated by the fact that in the so called early myoma, puberty begins much earlier than in normal cases. The climacteric which is well known to be a period of disturbance in ovarian function is the most dangerous age for myoma—70 per cent of the myomata observed occur from the fortieth to the fifty-fifth year. The frequent sterility of patients with myoma is also a sign of dysfunction of the ovary as well as the delay in the climacteric in myomatous patients. The disturbance in ovarian function is primary. B 3

Sessa P Changes in the Child's Ovary in Infectious Diseases (Sull'alterazione dell'ovaio in alcune nefle malattie infettive) *P d m* 9 4

By Zentralbl. f. d. ges. Gynäk. Geburtsh. s. d. Grenzgeb.

The author examined the ovaries of children from a few months to 3 years old who had died of uterine or chronic infectious disease and who had shown no clinical signs of ovarian disease. Nothing was perceptible macroscopically on autopsy. Microscopically there were generally more or less pronounced changes after acute infectious diseases, there were generally inflammatory changes in the cortex in chronic diseases such as tuberculosis, there was interstitial change in the ovaries. The finer histological changes are described. In very acute infectious diseases, especially in diphtheria,

there were frequently degenerative cysts in the parenchyma of the ovary that were visible only microscopically. ASCHENHEIM

Brill W The Histology of the Sympathetic in Its Relation to the Internal Secretion of the Ovary (Die Histologie des Sympathicus in ihren Beziehungen zur inneren Sekretion der Ovarien) *München med Wochenschr* 914 11 1256

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

After sketching the internal secretory tissue of the ovary, the follicle apparatus and its derivatives, the corpus luteum and the internal ovarian glands, as well as the general histology and physiology of the visceral nervous system, the author describes the histological picture of its groundwork in the ovary. In the ovary of rabbits and mice a visceral ganglion which is regarded as the most important transforming station for all forms of stimulation flowing into it shows extensive branching of the cerebrospinal sympathetic fibers around the ganglion cells and chromaffin cells which fill this sympathetic ganglion of the ovary. Other fine terminal networks surround the axis cylinder processes with loose meshes and the surface of the ganglion cell with end buds. These are numerous large multipolar ganglion cells with a network of neurofibrils that can be followed far into the axis cylinder processes and many widely branching dendrites.

The relation of the chromaffin-cells to the ganglion cells seems of especial importance from a functional point of view. The peripheral visceral innervation of the ovary with its far reaching effect on the genital and intergenerative tissue elements, is also represented in its end branches, pericellular end networks with numerous varicose formations in the course of the nerve fibers and at the end of the nerve fibrils.

As in other glandular organs the end branches of the nerves penetrate between all the cell elements of the part of the ovarian tissue that is concerned in internal secretion. The innervation of the internal secretory tissue of the ovary here represented provides a broad histological foundation for great independence on one hand and on the other for a far reaching influence of the different stimuli on all the specific functions of the ovary. KENGE

Schiffmann J Changes in the Ovaries after Irradiation with Radium and Mesothorium (Über Ovarialveränderungen nach Radium und Mesothoriumbestrahlung) *Zentralbl. f. Gynäk.* 9 4

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Different kinds of experiments were tried. Cuesa was used as in some cases the radium carriers together with the ovary were sewed into an artificially formed pocket of peritoneum while some of the carriers were laid free in the abdominal cavity. But in either case there were extraordinarily intense and characteristic changes of the ovarian tissue. The granulosa cells and the cumuli were most injured, the maturing follicles were transformed into

cysts the germinal epithelium remained intact and neither the interstitial cells nor the corpus luteum showed any constant changes. *MASTERS*

**Pyrami E.** The Adnexa in Inguinal Hernias (L. em. inguinale degn. annessi) *Cl. A. 914*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

Hernias containing the adnexa are cases of which are reported are only occasionally found in old women with relaxed abdominal muscles in other cases they are caused by anomalies in development corresponding to descent of the testes in the male. The diagnosis is very difficult in small girls especially differentiation from omentocoele in adult women points in diagnosis are pain in the coccyx, dysmenorrhea, change in volume during menstruation, and especially bimanual examination. The treatment must be surgical especially taking into consideration the frequent complications such as atrophy, cystic degeneration, new growths and torsion of the petiole except when the hernia also contains the pregnant uterus. *NAGELSSACK.*

**Schickels E.** Etiology of Pyosalpinx (Zur Ätiologie des Pyosalpinx) *M. nat. h. f. Geburtsh. Gyn. 94*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The patient who was 20 years old and had always been well took a douche of soapsuds to prevent conception and it was followed by bilateral suppurative salpingitis. There was rapid development of pyosalpinx on both sides the left one rupturing on the sixth day after infection. Severe peritonitis immediately developed. The operation which consisted of resection of both tubes and drainage through the vagina was followed by recovery. Haemolytic streptococci were cultivated from the pus. *REINHAUS.*

**Tausig, F. J.** Sarcoma of the Round Ligament of the Uterus. *S. 15 Gynec. & Obst. 94, 13, 38*

The author reports an unusual case of spindle-celled sarcoma of the round ligament associated with moderate prolapse of the uterus. The tumor was removed from a woman 44 years of age whose only complaint was a pressure against the bladder for the previous two years. The uterus, tubes, and ovaries were normal and the origin of the tumor from the round ligament was confirmed by microscopic examination. No metastases were found in any of the abdominal organs or lymph glands and the well-developed vessels within the tumor indicated its slow growth. Tausig was able to find a record of only five other cases of sarcoma of the round ligament and in all of them the microscopic examination showed a malignant degeneration of a previously existing fibromyoma.

A review of the literature of round ligament tumors showed a record of 141 cases of this sort. Tausig analyzes the physical and pathological

characteristics of this form of tumor. It springs more frequently from the extra abdominal portion of the round ligament and apparently is a little more common on the right than on the left side. Pregnancy stimulates its growth.

The most interesting feature of these tumors is their varied pathology—79 of them belong to the group of fibromyomata. In 19 instances there was a cyst covered by fibromuscular tissue. In one patient a dermoid cyst developed from the round ligament. The frequency of adenomyoma is perhaps the most striking characteristic. In Tausig's tabulation 30 cases out of 135 were thus diagnosed making them relatively four times as frequent as the round ligament as in the uterus. This may be due, perhaps, to the close relationship to the Wolffian duct and the nephrogenic band extending almost the entire length of the embryo. The 6 cases of sarcoma all seem to have been comparatively benign and no reports of recurrences or metastases are found.

## EXTERNAL GENITALIA

**Müller R.** Myoma of the Vagina (Beitrag zur Kenntnis der Vaginalmyoma) *A. ch. f. G. 94, 4, 5*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author reports 4 cases of myoma of the vagina, 3 in women and 1 in dogs. He discusses the cases published by Kleinwachter in his collective review he having collected 53 cases in 1882. Müller reports the 12 cases published since then, and discusses their etiology, histologic changes, topography, growth, age of the women, anatomy, clinical symptoms, diagnosis, and prognosis. *BACKE.*

**Paris, J. and Francay F.** Indications and Technique of the Transvaginal Operation in the Treatment of Vesicovaginal Fistulae (Indications et technique de la cure transvaginale pour la cure des fistules vésico-vaginales) *J. d'ur. 94*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

This method is indicated when the fistula is near the ureters, when it is complicated with stone in the bladder, when the vaginal opening is high up near the cervix, when there is much scar tissue in the region of the vaginal opening or adhesions to the pelvic bones after extirpation of the uterus. In very large fistulae with involvement of the neck of the bladder the vaginal route should be preferred.

The author does not favor Legue's transperitoneal route nor Bardheue's inversion of the bladder. He makes a long incision in the median line. The interior of the bladder is exposed by means of a retractor, the edges of the fistula are incised, the vaginal opening closed with a purse string suture, the bladder opening sutured with deep and superficial catgut sutures and the bladder closed with drainage below and above the patient occupying either the abdominal or lateral position. In 4 out of 6 cases there was complete recovery in one case where

the neck of the bladder was involved there was only decrease in the size of the fistula with incontinence persisting and once the sutures did not hold. In one case though continence of the bladder was restored, the high incision made a ureterovaginal fistula through which urine trickled this was later overcome by extirpation of the kidney. FRANK.

Rosenstein Secondary Repair in Complete Tear of the Perineum (Über die Sekundärnaht bei kompletten Dammrisen). *Zentralbl f Gyn* 44 94 xx iii 772.

By Zentralbl f d ges Gynak u Geburtsh. s d Grenzgeb

For secondary repair it is not necessary to wait six weeks or to send the patient to a hospital. The operation can be done at the end of two weeks in the patient's house. The buried sutures of the rectum should not penetrate the mucous membrane. Granulations and any new formed tissue should be thoroughly removed at the beginning of the operation. The bowels should be moved first on the sixth day by means of castor oil. ALTSCHÜLER.

Jellett H Suture of the Levator Ani Muscle in Perineorrhaphy Operations. *Lancet* Lond 94 i xx 35. By Surg Gynec & Obst

Although it is a generally accepted fact that the support furnished by the levator ani muscle either with or without its investing fascia is essential to the pelvic organs none of the old methods of perineorrhaphy provides for such suture. It is surprising how many are content to practice these operations because the easier and safer fact are told that suture of the levator ani muscle how essential it may be is a difficult operation and one not devoid of danger. During the past three years and a half 346 perineorrhaphies have been performed. In practically all the levator ani muscle has been sutured in an occasional case union has failed to occur and hematoma has formed. There has never been a death nor even a patient whose condition gave rise to anxiety owing to the occurrence of emboli from a necrotic encephalitis.

The essential feature of the operation are as follows: (1) The careful dissection of the necessary amount of vaginal mucous membrane of the rectum; (2) the exposure and suture of the separated levator ani muscle; and (3) the careful approximation of the uterine and vaginal mucous membrane in such a manner as to leave no projection or redundancy. The author describes his technique in detail. The advantages of his operation are its ease and its rapidity.

The following conclusions are reached: (1) The levator ani muscle is an essential part of perineorrhaphy.

Retention of the suture is always practicable except where the muscle is wanting owing to atrophy after injury.

(2) The possibility of suture of the levator ani muscle is not denied.

I W & L C L.L.

## MISCELLANEOUS

Hauser Vaccine Diagnosis and Treatment in Gonorrhoea in Women (Über die Vaccinodiagnostik und Therapie bei der Gonorrhoe der Frau). *Berk. A1* 914.

By Zentralbl f d ges Gynak u Geburtsh. s d Grenzgeb

The author's experiments in diagnosis and treatment were carried out with Reiter's vaccine A.—10. His conclusions are that injection of gonococcus vaccine is a useful method of differential diagnosis. A positive focal reaction as well as a positive general reaction accompanied by a positive local reaction shows the presence of gonorrhoea. A negative result does not absolutely exclude gonorrhoea.

In all cases of local gonorrhoeal disease with an active focus or one capable of reactivation the vaccine causes a rapid improvement in the subjective symptoms and in many cases there is also objective cure. Because of the small number of cases and the fact that they were not under observation long enough no decisive judgment can be passed on its therapeutic action or its ultimate results. But at any rate vaccine treatment is to be recommended as a supplement to other treatment. BLANCH.

Pazzi M Mutual Functional Relations of the Glands of Internal Secretion as an Element in the Causation of Changes in the Psychic Personality of Woman (Correlazione funzionale delle ghiandole endocrine e della personalità psichica della donna). *Gazz. med.* 93 i 38.

By Zentralbl f d ges Gynak u Geburtsh. s d Grenzgeb.

Pregnancy is regarded as the source of an endo-intoxication from which the woman can neither guard against nor save herself if the normal antitoxic functions and the functions of the glands of internal secretion do not do their part and overcome the threatening physiological disturbances and restore the organism to its normal balance.

It cannot be denied that pregnancy is a cause of mental disturbance which may drive the woman to madness with criminal tendencies and with partial or total amnesia on account of consciousness of her actions. A detailed review is given of the literature regarding the function of the hypophysis and its relation to the genital organs. The author believes that the mental and psychic disturbances that lead the pregnant woman to destroy her child are related to disturbance in the function of the hypophysis. Because of a transitory interference with the balance of the circulation in the brain at the moment when the fetus leaves the uterus this disturbance of function manifests itself in a stormy aggressive and temporary form. He believes further that the negative pressure of the blood men causes a hyperemia from vacuum in the pelvic organs that interferes with the nutrition of the brain. This does not explain the pathological cause of crime but it broadens the field of legal medicine.

First o

Andrews H R Tuberculosis of the Female  
Genital Organs *Cf. A. J. G. 4* 1914, 335  
By Surg. Gynec. & Obst.

The author states that according to the statistics of several writers tuberculosis of the female genital organs occurs comparatively frequently but that it is not of clinical importance except when it involves the fallopian tubes or the cervix. The infection is seldom primary in its origin but is usually secondary to a tuberculosis of the lungs or of the alimentary tract the infection being conveyed by (1) blood (2) bronchial glands (3) tuberculous peritonitis, when particles usually from an infected appendix or caecum have been swept into the fallopian tubes by the peristaltic movement of their cilia (4) gonorrheal salpingitis which predisposes to a tuberculous infection by destroying the integrity of the mucosa of the tube (5) tuberculous semen (not proven) (6) tuberculosis of the rectum which may by continuity extend to the vagina (7) soiled clothing, directly infecting the vulva (8) tuberculous urine causing a local infection of the vulva.

The chief clinical importance of tuberculosis of the cervix is that it may be mistaken for carcinoma. The infection usually begins in the mucosa of the cervical canal or in the deep part of the glands, but it may occur on the vaginal aspect of the cervix. In appearance it resembles ectropia or it grows in masses of fine elongated papillae glued together with viscid mucus. The absence of friability and tendency to bleed together with the soft edge and the youth of the patient would usually differentiate it clinically from carcinoma but the microscopical examination of a section removed from the cervix should establish the diagnosis.

In tuberculosis of the fallopian tubes the mucosa is the first structure to be involved the muscle is the next and the peritoneum the last. The involvement is usually bilateral, both abdominal ostia being closed and the tubes studded with milium tubercles while cheesy nodules may lie in the wall or in the interstitial part of the tube or the whole tube may be enlarged tortuous adherent and filled with cheesy material as a result of the infection. In the chronic stage there is an excessive formation of connective tissue with calcification of the contents of the tube and dense adhesions to the neighboring structures. The symptoms are constant pelvic pain with increased and painful menstruation. The uterus is fixed in the pelvis and at one or both sides may be fixed adnexa. In the early stage of the infection there is no alteration of the tubes macroscopically and it is not usually possible to make the diagnosis except by the aid of the microscope but late the condition is characteristic of tuberculosis.

If tuberculosis of the cervix is seen early the author believes it is possible to effect a cure by scraping and cauterizing the diseased area but if not seen until a late stage he advises the removal of the cervix, or the cervix together with the

uterus and the appendages if they seem to be involved.

In tuberculous salpingitis according to the writer there is no hard and fast rule for dealing with the adnexa. If the adhesions to the intestines are not too extensive both tubes should be removed together with both cornua containing the interstitial part of the tube. If the adhesions to the intestine are dense and there are no evidences of tuberculous ulceration of the intestine nor suppuration of the tube it is better to leave them alone as in such cases removal is often followed by the formation of a fecal fistula and there is some danger of producing an acute general tuberculosis. As the uterus may be diseased and since it is useless without the tubes hysterectomy may be advisable although it increases the severity of the operation and many patients have remained in good health when the tubes only have been removed. The ovaries are often healthy even when the tubes are diseased and should not be removed in a young woman unless they are definitely involved.

If drainage is employed it should be done through the vagina and not through the abdominal wound, in order to lessen the risk of a fecal fistula or an infection of the wound and a resulting postoperative hernia.

LILLIAN M. P. FARRAR

Ulesko-Stroganova, K P Malignant Tumors of the Female Genitalia (*Die bösartigen Geschwülste des weiblichen Genitalapparates*) 1914  
Ges. 10 4, 22 750  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author calls attention to the great prevalence of malignant tumors of the female genital system. He thinks this is due to the frequent irritation of the genital system which leads to hyperplasia and thus to carcinoma. The hyperplasia carries the germs of malignant degeneration. It is often difficult to distinguish benign hyperplasia from malignant tumors either macroscopically or microscopically. He agrees with Orth and Hansmann's opinion that hyperplasia is a precancerous condition.

VON HILST

Klumenko, V Diphtheria of the Genital Organs in Children (*La diphthérie des organes génitaux chez les enfants*) *Chin. p. et méd. chir. d. 1914*  
10 3, 12 247  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A ten-year-old girl after two days sickness with out inflammation of the throat developed a diphtheria of the genitals which caused pain on urination. A sister of the patient had a diphtheritic angina. It was assumed that the infection had been transmitted through the clothing but the possibility suggested by Conrad and Bierstorf should be taken into consideration namely that bacilli may be excreted through the urine even in cases where inflammation of the throat has been noticed. The disease begins with burning on micturition swelling and bluish red color of the labia majora which are painful to the touch. The clitoris

increases and a few days later a pseudomembrane appears. Early serum treatment is important with a view to decreasing the relatively high mortality.

ALSTER.

Winslow R. The Significance of Pain in the Right Iliaac Fossa in Young Women. *Ill. J. Med.* 1914; 2: 81.

By Surg. Gynec. & Obst.

Right sided pain is usually thought to be due to appendicitis. The acute cases or the chronic cases with definite localizing symptoms are readily recognized. In the author's experience this symptom in young women is often due to some other cause. Some are of undoubted hysterical or neurotic origin but with some underlying physical cause. He differentiates from enteroptosis by injecting the colon with bismuth and by X-ray from nephroptosis by palpation of the kidney under an anesthetic if necessary from disease of the right tube by vaginal examination. In several operations for supposed appendicitis a small ovarian tumor was found in each case. Cholelithiasis with distended gall bladder may simulate appendicitis but percussion over the gall bladder will elicit marked tenderness and the gall bladder can be detected under an anesthetic if necessary. Stone in the right ureter gives urinary symptoms with blood in the urine. Abdominal crises due to Meckel's diverticulum perforating ulcers, intestinal obstruction and pneumonia, particularly in children are to be considered. In typhoid fever the fever precedes the pain as pointed out by Murphy.

The author states in conclusion that he has come to believe that in young women unless the symptoms of appendicitis are frank and clear the condition is probably something else. Pain and tenderness in the right side without rigidity, elevation of temperature and leucocytosis is usually not appendicitis. Again apparently severe and long-continued pain in the right side in girls is more likely to be neurotic than appendiceal. Pain may also be reflected from the pelvic organs or some of the other viscera and the primary seat of the disturbance may be determined by a more careful examination.

S. A. CHAPMAN.

Ebelier F. Röntgen Treatment in Gynecology (Die Röntgenbehandlung in der Gynäkologie).

*Strahlentherapie* 4: 579.

By Zentralblatt für Geburtsh. u. Gynäk.

The author discusses the roentgen treatment of myoma, carcinoma and diseases of the uterus. The technique at first with that of Albert-Schönberg later 15 m focal distance 3 mm aluminum filter hardness of tubes 20 W intervals of three weeks between the series of treatments. In the beginning fields with 180 to 40 W later 1 field

with 90 to 120 W per series. Among 33 cases of myoma 21 were treated with amenorrhoea resulting in 76.19 per cent oligomenorrhoea in 9 per cent and failure in 14.2 per cent. Among 20 cases of uterine disease there were good results in 93 per cent amenorrhoea in 80 per cent. Five cases of carcinoma were treated with roentgen rays alone with disappearance of suppuration and pain and cleaning up of the ulcers. One carcinoma was treated with roentgen rays and radium combined.

MILLER CARROSA.

Jayl M F. The Employment of Hypophysary Ophotherapy in Gynecological Practice Its Immediate Results. *Ill. J. Med.* 1914, vol. 216.

By Surg. Gynec. & Obst.

In a series of over 400 cases Jayl attempted to determine the immediate effect of the administration of a pituitary preparation upon patients affected with various utero-ovarian troubles. The gland selected was that of the ox and it was prepared after the method of Choay. The preparation was administered subcutaneously each ampulla corresponding to 0.05 gm of the posterior lobe. The injections were given every other day beginning with one fourth of an ampulla the dosage being increased daily so that a whole ampulla was given as the fourth dose.

General reaction was noted at once it consisted of blanching, colicky pains, headache and insomnia. Ten cases taken at random from the series, are briefly reported, the following results being obtained: diminution and often complete arrest of uterine discharges, relief of pelvic pain arising from salpingitis, metritis and parametritis, regulation of the menses and control of hemorrhage due to subinvolution, metritis and sclerosis of the uterine vessels.

Wm H. CARY.

Benthin W. Bacteriological Examinations in Gynecological Diseases the Question of Autoinfection in Gynecology (Bakteriologische Untersuchungen bei gynäkologischen Erkrankungen. Ein Beitrag zur Frage der Selbstinfektion in der Gynäkologie). *Monatsh. f. Geb. u. Gyn.* 1914, 23: 65.

By Zentralblatt für Gynäk. u. Geburtsh. u. Grenzgeb.

Unfortunate results after gynecological operations always bring up anew the question of autogenous or endogenous infection. For this reason the author examined 500 cases bacteriologically. The mortality in those with hæmolytic streptococci was 29.4 per cent while in the cases where they were not present it was 4.2 per cent. An attempt must be made to free the vaginal secretion from bacteria before the operation especially from hæmolytic streptococci. The most effective method seems to be warm douches with 1/1000 bichloride.

WEISSWANG.

# OBSTETRICS

## PREGNANCY AND ITS COMPLICATIONS

Michel L.: The Significance of Abdominal Pregnancy for the Practitioner (Die Bedeutung der Bauchschwangerschaft für den Praktiker) *Fortseher d. Med.* 914 22 617

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The etiology of the above is not definitely determined. Chronic salpingitis is of importance as is shown by the fact that the average age of women who have extra uterine pregnancy is 30 years and that the pregnancy is generally preceded by several years of tenity. The consequences of chronic salpingitis are adhesions of the mucous membrane and formation of diverticula in the musculature of the tube. Internal or external causes, such as erosion of a blood vessel coats, or a blow may cause a sudden hyperpressure in the intervillous spaces and the thin wall of the tube ruptures, causing rupture or tubal abortion. With the first free bleeding the ovum is floated out of the ampullar end of the tube and the remnants that are left behind cause secondary hemorrhages that sink down into Douglas pouch and form a matocle. The fetus generally dies and maturation and sometimes infection and suppuration take place.

The symptoms vary depending on whether there has been rupture or abortion. Important points in the history are premenstrual pain, the tubes, sterility, irregular menstruation, interference with urination, attacks of dizziness and objectively the findings on palpation. Differential diagnosis must be made from inflammatory tumors of the adnexa, inflammatory exudate, pyelitis and perforating peritonitis and in the middle third of pregnancy from retroflexion of the gravid uterus, and from the pedicle of an ovarian cyst. In doubtful cases exploratory puncture of the vagina may be made. Michel does not think that Abderhalden's reaction can be depended upon. He would not attempt sounding or curettage on account of the danger of infection. He agrees with Sgarbi that operation is a social necessity.

G. SATZO

Kohlmann W.: The Treatment of Early Tubal Pregnancy with Report of Cases. *V. Oel. M. & S. J.* 931

By V. rg. Gynec. & Obst.

Since January 91 the author has performed upon 20 cases of ruptured tubal pregnancy with one death. Nine cases operated upon immediately after rupture were in a serious condition.

In case of doubtful diagnosis the patients were kept under careful observation in the hospital. Kohlmann operates immediately without waiting for recovery from shock. In serious cases infusion

is begun as the abdomen is opened. The abdominal route is always chosen. Large clots and liquid blood are removed but no elaborate toilet of the peritoneal cavity is made. The diseased tube is always removed. The other tube is not removed if healthy. He prefers to drain these cases through the posterior vaginal fornix.

WM. H. CART

Saellitzky Eclampsia without Convulsions (Eklampsie ohne Krämpfe) *Festschr. f. Prof. Festschr. Moskau* 914

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. s. d. Grenzgeb.

The author discusses the different forms of intoxication in pregnancy and tries to classify them. He takes up the theories of eclampsia, basing his conclusions on the anatomical changes in the internal organs. He agrees with Schmorl's conception of eclampsia without convulsions. Eclampsia is not a disease of any special organ but of the organism as a whole and eclampsia without convulsions is neither an abortive rudimentary atypical eclampsia nor an eclampsia without eclampsia but is an independent typical subvariety of eclampsia.

The case history is given of a 35-year-old primipara who was troubled with difficult respiration, headache and severe pain in the region of the heart. All her labors had been difficult on account of contracted pelvis. Fetal heart sounds were not perceptible. The child was delivered spontaneously and weighed 2,050 gms. The placenta was also delivered spontaneously. Four hours later the patient showed restlessness, disturbance of vision, twitching of the face muscles, coma, but temperature normal. After one and one-half hours coma occurred again and lasted for five minutes. The pulse was 140. Icterus developed followed by coma again. The per cent of albumin was 8. There were different forms of cylinders. Anuria ensued and the patient died of heart failure and a dem of the lungs. Post mortem examination showed parenchymatous degeneration of the heart muscle, the liver was enlarged and had necrotic foci, uraemia and oedema were present. The kidneys were large and oedematous. There was bloody transudate in the pleural and peritoneal cavities. Microscopically there was also to be necrosis of the brain tissue, heart muscle, kidney epithelium, liver cells and lung tissue. There was total necrosis of tissue in the spleen, also in the mammary glands, pancreas, thyroid and intestinal tissue of the uterus. The diagnosis was necrosis of the viscera. The author excludes sepsis. The micro-organisms that were found in places had entered post mortem.

He collects 5 cases from the literature—34

of them or 66.6 per cent died. The author thinks that in cases of Ubeck's that recovered should be excluded and this brings the mortality up to 90 per cent. The treatment of eclampsia is rapid delivery and serum treatment. Expectant treatment is irrational. Blood letting is occasionally helpful. The work is accompanied by a bibliography of 9 titles. JANTER.

**Lichtenstein** Euphyllin as a Diuretic in Eclampsia  
(Hilbung d. Urose bei klammische Noma durch intramuskuläre Euphyllininjektion) / *Abh. f. Gynäk. u. G. 4 x x u 833*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.  
Lichtenstein reports five cases of eclampsia in which he increased the diuresis by injections of euphyllin. A critical judgment of the effect of the remedy in the cases given is as the author admits, extraordinarily difficult. In suitable cases however the advantages of the new diuretic—prompt action and the possibility of application by injection—should be utilized possibly in connection with digitalis which is said to heighten the effect of euphyllin. The author recommends three injections daily of 0.48 and in some cases it should be given prophylactically. The remedy is added to the methods of treating eclampsia. 11 14 1

**Bernstein R.** Dermatologic Toxæmia of Pregnancy; Their Recognition and Treatment  
*Abh. f. Gynäk. u. G. 4 x x u 833*

The author describes briefly the dermatological manifestation of the toxæmia of pregnancy which are he says little different from those of any other toxæmia. The treatment of the skin condition is dependent upon removing the skin condition. He has the patient drink copiously of soft or distilled water, opens the bowels, and uses a rice diet. Locally he uses some mild soothing lotions as calamine lotion, an ointment as unguent bismuth sub-nitrate or an oleaginous substance—as liniment oil emulsion. Internally he uses the remedies indicated by the general skin condition. C 11 D

**Richter M.** Air Embolism in Criminal Abortion  
(Die Luftembolie bei krimineller Abtreibung)  
*Abh. f. Gynäk. u. G. 4 x x u 833*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.  
The first case was in a 28-year-old woman who had injected soap-suds into the uterus with the so-called balloon syringe and was found dead. There was foamy blood in the right heart. In both ovarian arteries especially the right one and in the inferior vena cava there were also numerous air bubbles. In the uterus between the lower pole of the separated ovum and the uterine wall there was also foamy blood.

The second case was also a 28-year-old married woman who had attempted abortion with an irrigating syringe and boric acid solution. Here too

there was foamy blood in the right heart, the inferior vena cava and the pelvic veins.

In all cases of sudden or unexplained death in pregnant women it is well to think of the possibility of embolism from air or from the injection of toxic substances into the circulation. If air embolism is suspected the autopsy must be performed in a special way. The skull should not be opened before the section of the abdominal organs because blood may flow out of the longitudinal sinus and allow air to enter. Air embolism is more apt to occur when the patient herself has applied the douche. The fatal result may not follow immediately but sometimes after several hours. The best prophylactic measure is to prevent the sale of intra-uterine douches to the laity. BENTON.

**Mauclair and Tissier L.** Gangrenous Perforation of the Uterus after Induced Abortion (L'éroration utérine gangréneuse après avortement provoqué)  
*Bull. Soc. d. m. d. f. g. d. F. anc. 1914 XI 95*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.  
Infectious metritis is only exceptionally the cause of gangrenous perforation of the uterus; the great majority of the cases are caused by mechanical or chemical injury of the wall of the uterus. In support of this view the following case is reported. Laparotomy was performed on a 20-year-old girl for peritonitis 48 hours after an attempt at criminal abortion in the second month of pregnancy. In the middle of the fundus there was a circumscribed bluish softened spot but there was no perforation. Death resulted after 20 days. Autopsy showed a crater-shaped perforation at the necrotic spot. RICHMAN.

**Lepage G.** Treatment of Abortion (Conduite à tenir dans les accide. à consécutifs à l'avortement)  
*J. d. med. 18. av. 941 8*

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The majority of cases of abortion are criminal in nature. It is desirable to obtain a knowledge of such procedures beforehand as the treatment depends on whether or not they have been undertaken. Spontaneous abortion has a favorable prognosis if not caused by a febrile general condition. In afebrile two-stage abortion the expectant method can be followed for a considerable length of time. If criminal attempts have been made previously the expectant treatment must be shortened. In attempt should be made to hasten the delivery of the ovum by ulphat of quinine. If this medication has no effect the uterus must be emptied with the finger or with instrument under the control of the finger. If fever appears after the emptying of the uterus, the uterus must be irrigated and drained and often curetted. The latter should not be done when there are symptoms of disease of the adnexa, uterus or peritoneum. In absence of Douglas pouch colpotomy may be useful. Hysterectomy is seldom necessary generally local treatment is sufficient if it is undertaken soon enough.

With these methods of treatment in 370 cases

there was a total mortality of 1.62 per cent. It was 0.39 per cent in the cases where operation was not necessary, 4 per cent in the operative cases. The prognosis depends less on the method of treatment than on the condition of the patient when she reaches the hospital. FRAANKSTEN

**Deletraz.** Dermoid Cyst of Both Ovaries and Pregnancy (Kystes dermoïdes d'ovaires et grossesse). *Bull. Soc. belg. de gynéc. et d'obst.* 94: 2 461

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

In 132 cases of ovarian tumors the author has encountered pregnancy 12 times. Torsion of the pedicle occurs oftener in the first half of pregnancy than in the second. Rupture of the cyst does not occur any more frequently in pregnancy than at any other time. Every ovarian tumor diagnosed during pregnancy should be operated on. Ovariotomy is justified by (1) the dangers to which the woman is exposed during the pregnancy such as torsion of the pedicle, rupture and suppuration, (2) the complications that it may cause during labor, and (3) consideration for the child's life. In pregnancy there are 17 per cent of abortions and 39 per cent of the children die during labor. The abdominal route is to be preferred to the vaginal. Deletraz reports a case of successful removal of two ovarian tumors by the abdominal route in the third month of pregnancy. JAEGER

**Banister J. B.** Pregnancy Complicated by Severe Morbidity of Cordis. Two Cases Treated by Hysterotomy under Spinal Anesthesia. *Lancet* Lond. 19: 414. 444. By Surg. Gynec. & Obst.

The first patient was a primigravida four months pregnant with uncompensated mitral stenosis. At the time of delivery she had edema of both lungs. She was delivered by vaginal hysterotomy under spinal anesthesia and died the next day.

The second patient who was eight and a half months pregnant had myocardial degeneration. There had been three failures of compensation in the last three pregnancies. She was delivered by abdominal cesarean section and was stabilized during the fifth decompensation occurring in the fifth pregnancy. Both mother and baby died.

The author believes that by hysterotomy vaginal up to the twenty-fourth week and abdominal after that date under spinal anesthesia is the best method of treating severe cardiac lesions as it subjects the patient to the least strain. Successful pregnancies materially shorten the expectation of life and for that reason sterilization should be carried out whenever practicable. F. C. IANV

**Bertlich H.** Interference with Pregnancy and Labor by Malformation of the Uterus Especially Uterus Bicornis (Schwangerschaft und Geburtstörung bei Missbildung des Uterus speziell bei Uterus bicornis). *Wien. Rundsch.* 914: 303

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The author discusses the disturbances of pregnancy and labor from bicornuate uterus basing his

conclusions on 5 cases of his own and 60 from the literature. The most frequent complications are a tendency to premature interruption of the pregnancy, lengthening of labor, rupture of the uterus, abnormalities in the position of the fetus and interference with the third stage. Diagnosis and treatment are discussed and in the matter of treatment Strassmann's method of uniting the two horns of the bicornuate uterus is preferred. SIENK

**Remy S. and Remy A.** A Case of Death from Embolism during Pregnancy (Un cas de mort par embolie à cours de la grossesse). *Rev. mens. de gynéc. d'obst.* 10: 914: 53

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

The authors report the case of a 31-year-old woman who after the fourth pregnancy had had an inflammation of the intestines from which she soon recovered. The fifth delivery was rapid and uneventful and the puerperium normal. In December 1911 after she had stopped menstruating the menses reappeared, but the hemorrhage stopped under suitable treatment and the pregnancy continued. September 21st was reckoned as the time of the beginning of pregnancy. On the seventeenth of June she complained of pains in the calves of her legs due to indurated veins but the trouble improved with rest and compresses. Ten days later she had pains in the pubic region. On the morning of the third of July she got up suddenly became pale and fainted. She recovered consciousness but felt very bad. The pulse was bad and the respirations steadily grew more rapid. In spite of abundant administration of stimulants she grew worse and worse. In the afternoon labor pains began. Twenty-two hours after the appearance of the first symptoms of embolism she died. Focal heart sounds were still heard after her death, and as the pains had already dilated the os the child was extracted by version. The child was dead. BERNARD

**Delagénière H.** Pernicious Vomiting of Pregnancy and Appendicitis (Vomissements perniciose de la grossesse et appendicite). *G. de gynéc.* 94: 45

By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

Delagénière gives five case histories in detail and points out that in certain number of cases pernicious vomiting of pregnancy is caused by chronic appendicitis with acute or subacute exacerbations. Appendicitis brings about a cure of the vomiting without the necessity of interrupting the pregnancy. He believes that the majority of cases of pernicious vomiting are caused by some irritation of the peritoneum the peritoneum being sensitized so to speak by the pregnancy. The cause of the vomiting in some cases may be appendicitis, in others retroflexion of the pregnant uterus, salpingitis, ovarian cysts, etc. In such cases it is only necessary to remove the cause in order to cure the vomiting. Emptying the stomach has the same effect but use the sensitiveness of the uterus is decreased but if pregnancy occurs again the vomiting is sure to return. FRANKSTEN



Lynch F W: The Treatment of Pernicious Vomiting of Pregnancy J M & S M Soc 9 4 u. 459 By Surg Gynec & Obst

From his investigations the author concludes that the term ammonia coefficient should be discarded as inaccurate in meaning unless qualified by the absolute amounts of ammonia it is supposed to describe. There is doubtless a toxic basis for all cases which deserve the diagnosis of hyperemesis gravidarum. These cases present the urinary findings of acidosis. The crystals of leucin and tyrosin were readily demonstrated. This was considered to be an indication of starvation.

In cases of the chronic type the following treatment has rarely failed. Rest in bed is most important. Large doses of bromide 40 to 60 gr q 4h are given by rectum. Sodium bicarbonate and glucose are also given. Nothing is given by mouth for several days until the bromide has taken strong effect and vomiting has ceased. Liquid food is not well tolerated. Solid food especially broiled meat is given. With improvement carbohydrates are added to the diet. Water is not given with the meals sufficient fluid being given as normal saline by rectum. This treatment is not indicated in the fulminating type of case with icterus and other severe clinical symptoms. Such cases should be aborted without delay. Chloroform anaesthesia should never be used. A trous oxide with oxygen is better than ether. In desperate cases morphine and scopolamine narcosis is urged. Wm H. CARY.

Ca arzani D Bossi's Method in Osteomalacia (Die Methode Bossi bei Osteomalacia) Z m d M f G 1 0 4 22 u 63

By Zentralbl f d ges Gynak Geburtsh d Grenzgeb

The author reports the results he has obtained with Bossi's method of treatment in osteomalacia. Bossi believes that the adrenals regulate bone metabolism. In pregnancy the balance in bone metabolism is disturbed partly because of the great functional increase of the glands and partly by the antipruritic effect of the secretion of the osteomalacia is produced which induces in the physiological change of pregnancy. The best proof of this theory is the result of treatment.

The case which recently has been obtained by patients treated are to be regarded as the result of the process relating between the adrenal gland with the secretion. Since osteomalacia is a disease of bone or in the bone produced it will be influenced by all general conditions which influence the organism. B. L. W. 127

## LABOR AND ITS COMPLICATIONS

Sassonow Statistics of Delivery in Contracted Pelvis (Z m d M f G 1 0 4 22 u 63) By Zentralbl f d ges Gynak Geburtsh d Grenzgeb

The work is based on 8661 obstetrical cases. Of these 2,313 were in contracted pelvis.

— 26.9 per cent. There was operative delivery in 222 cases. In primiparae the most of the operations were forceps at the outlet and in the cavity of the pelvis in multiparae high forceps perforation artificial premature delivery etc. There was perforation in 6.7 per cent of the operative deliveries.

Artificial premature delivery gave unfavorable results for the children of whom 75 per cent died. Operative delivery was necessary in 12.6 per cent of the primiparae with contracted pelvis and in 8.3 per cent of the multiparae.

The majority of the operative deliveries were in cases of flat pelvis. 84.6 per cent of the primiparae had a normal puerperium after spontaneous delivery and 70.5 per cent after operative delivery. In multiparae the figures were 90.6 per cent and 90.8 per cent. Four women died. The mortality of the children was the same for primiparae and multiparae. In operative delivery 28 per cent of the children were dead. deducting those dead before delivery reduces the mortality to 4.6 per cent. Delivery was on the whole, conservative as 90.5 per cent of the cases were delivered spontaneously. J. EATYER.

Stroganoff W W Management of Labor in Contracted Pelvis (Über die Leitung der Geburt bei engem Becken) R k 1 0 4 22 u 63, 33 By Zentralbl f d ges Gynak Geburtsh d Grenzgeb

The author gives a general review of the methods of operation in use in labor with contracted pelvis, and from the statistics of maternal and infantile mortality in operative delivery and spontaneous delivery with a true conjugate of 7 cm or more comes to the following conclusions.

In absolutely contracted pelvis—true conjugate 5.5 to 6.5 cm—caesarian section should be performed. In infected cases or those where infection is suspected it should be done by Kustner's or Latzko's extraperitoneal method.

With a true conjugate of 6.5 to 7 cm and a living child caesarian section should be performed. Perforation should be done only in case the mother refuses a major operation. If the child is dead perforation should be done.

With a true conjugate of 7 to 8 or more and a living child the author recommends: (a) In primiparae conservative treatment. If the head enters the pelvis and operation is indicated forceps delivery may be undertaken. If in the second stage the head remains for some hours above the pelvic inlet extraperitoneal caesarian section should be recommended to the mother. If she does not consent forceps should be attempted and if this fails, perforation must be resorted to. (b) In multiparae who have had living and viable children before expectant treatment should be tried first and then forceps or if the head does not enter the pelvis, pubiotomy. If the patient has borne only dead children before and the deliveries have been very difficult artificial premature delivery should be proposed during pregnancy and if refused pubiotomy forceps or possibly perforation should be undertaken during labor. A. WARTH.

Kirstein *Delivery of a Woman with a Kyphotic Funnel Shaped Pelvis* (L. thundu g einer Frau mit kyphotischem Trichterbecken) *M. dtschr. f. Geburt k. u. Gynäk.* 1914 xxxix, 715.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A very small primipara had a rachitic double S-shaped curvature of the spine and marked funnel shaped pelvis. The promontory was displaced far backward the apex of the sacrum forward the tuberosities of the ischia inward so that the outlet of the pelvis was very narrow — true conjugate 5 transverse 9 cm. After 15 hours pains the head had reached the floor of the pelvis in good position. Three hours later no more progress had been made. Perforation of the living child was being considered but contrary to expectation an attempt at forceps delivery succeeded and a strong living child was delivered without injury. REHMANN

Florence J. *Frequency of Shoulder Presentation Indications for Version and Embryotomy* (D la fréquence des présentations de l'épaule indications de la version et de l'embryotomie) *Bull. Soc. d'obst. et de g. d. l'or.* 914 iii 375.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In the tropics where rickets is unknown and abnormalities of the pelvis are rare embryotomy is seldom if ever performed but version is performed even in extreme cases of transverse presentation. The author believes that podalic version should be undertaken only when the hand can be inserted in the uterus but that when the hand cannot be inserted a mutilating operation should be performed. Rupture of the uterus by the hand is not much to be feared. In 66 cases of version the author has never seen it occur. Embryotomy with Blauwe's instrument with uterine decapitation is to be undertaken only in severely infected cases of transverse presentation as the latter method can be carried out without a completely dilated os without special instruments and without any great degree of injury. DOAN

Potocki and Sauvage *Retraction of the Uterus on the Decapitated Head* (Rétraction de l'utérus sur l' tête isolée séparée par décollation) *A. n. d. gyn. et d. obs.* 913 xli 357.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In order to extract the decapitated head traction may be made with the finger placed in the mouth if this fails forceps may be used if this fails also craniotomy must be performed. If the uterus is convulsively contracted all these methods may fail even under anesthesia. Then an attempt must be made to relax the uterus by the giving of large doses of morphine or chloral. The delivery of the head is then easy, and often occurs spontaneously. Though the head has been known to remain in the uterus as long as 112 days such a delay should not be allowed as it is too dangerous. If all other methods fail, the last resort is total extirpation. The authors had to perform total extirpation after decapitation in a case of neglected transverse presenta-

tion in a girl of 17 as it was not possible to reach the head in any other way the uterus having contracted tetanically around it. After having septic parietitis the girl recovered. JACOB

Zimmermann R. *Cause of Surprisingly Rapid Delivery in Disease of the Spinal Cord* (Über die Ursache des überraschend schnellen Geburtsablaufes bei Rückenmarkserkrankungen) *A. d. f. Gynäk.* 1914 vi 563.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

A III para had an attack of acute anterior poliomyelitis, and barely three hours after the rupture of the membranes a very large child was delivered in spite of the complete lack of abdominal pressure and in spite of the disproportion between the size of the child and the pelvis. Such a surprisingly rapid delivery would suggest the thought that the activity of the uterus is unbridled and that certain regulating inhibitions that are active under normal conditions were here done away with. Zimmermann points out that a reflex action on the uterus could take place only through the spinal cord and if a stimulating effect of the central nervous system is possible then the conclusion is justified that the central nervous system could also have an inhibitory effect on the activity of the uterus.

Complete anesthesia of the lower half of the body does not delay delivery. If total paralysis of the lower half of the body and the lower uterine segment together with the abolishment of sensation, is brought about by spinal anesthesia with novocain, in the first stage the frequency of the pains is decreased and the pauses between them lengthened in the second stage, however as long as the anesthesia continues the length of the pains increases and the pauses between them grow shorter. The inhibitory reflex that restrains the excessive irritation of the nerves of the genital organs and pelvic floor by the presenting part of the child is a wise provision as it protects the body of the parturient woman from a too brutal effect of the automatic activity of the uterine musculature. BAYSE

Ahlfeld F. *Treatment of the Third Stage, and Manual Separation of the Placenta* (Vaggeburtshandlung und manuelle Placentalseparierung) *Ztschr. f. Geburtsh. Gynäk.* 94 lxxvi, 167.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Ahlfeld comes to the following conclusions. The less external manipulation of the uterus is done the less necessity there will be for manual separation of the placenta. The cases that do occur will be due to pathological conditions, and are not dependent on the expectant method nor on external manipulations. FRANK

#### PUERPERIUM AND ITS COMPLICATIONS

La Torre F. *Nutrition in the Puerperium* (Conseils de l'alimentation puerpérale) *C. r. Acad. Rome.* 94 xv, 43.  
By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author thinks it desirable that physicians should give more attention to the subject of diet

and reach some conclusion as to the diet of mothers and of grandmothers or old women. In order to decide what nutrition is suitable for the puerperium we must take into consideration what has happened and what is still to happen. The toxins collected during pregnancy and labor must be gotten rid of and the body must be brought back into a normal condition while undergoing a period in which certain injuries and alterations are still affecting it such as lochia milk secretion excessive excretion of sweat and urine.

If the physician keeps clearly in mind that the puerperium is a time during which the injured organism is undergoing a *restitutio ad integrum* it will give him a clue to the proper diet to be given through of course the constitution and conditions of life of the patient must be taken into consideration. He will probably have considerable opposition to overcome in the carrying out of such a régime for the public is all too much inclined to adhere to the old false ideas according to which the body of the woman, in need of restoration to strength, was still further weakened by a diet of tea and other non-nutritious substances and by excessive purgation sometimes even by blood letting. The author thinks that many diseases of the puerperium or even permanent injuries to the system can be avoided by a suitable diet. F. CUS

Beckmann W. Puerperal Inversion of the Uterus (Einnige Bemerkungen über die puerperale Uterusinversion). Zentralbl. f. Gynäk. 94: 49, 1904.  
By Zentralbl. f. d. ges. Gynäk. Geburtsh. d. Grenzgeb.

Beckmann reports two cases in which he undertook operative reinversion by Kustner Piccoli's method. Both cases were apparently pure cases of inversion, but afterwards both showed severe symptoms of infection from which one died. Therefore before the operation he treated the inner surface of the uterus in the second case with tincture of iodine staphylococci had been demonstrated on it. He left Douglas's pouch open and drained it. There was local infection of the pelvic peritoneum but the patient recovered.

He sees a further disadvantage of this operation in the gaping of the edges of the uterine wound. In both cases he thinks the inversion was entirely spontaneous. He explains it as the result of decreased use of the uterine muscle in connection with paralysis at the time of the placenta short cord large placenta or location of the placenta at the fundus. FRANKENSTEIN

Filant J. A. Retrodisplacements of the Uterus, Following Confinement. Am. J. Obst. 94: 1, 1904.  
By S. R. G. J. et al. Ob. t.

The author calls attention to the fact that while many papers are written on displacements little has been said of the frequency and causation, and that the writers of textbooks in obstetrics have passed it by with a few general statements regarding the use of the knee chest position in the pessary.

In 273 private and hospital patients there was a retroversion in 58 or in 21.3 per cent. Of 37 cases occurring in hospital practice 25 were primiparae and 9 of these had no apparent laceration. The author believes that retroversion after labor is an accidental occurrence that is a heavy uterus freely movable in the pelvis may be turned over backward or may remain forward according to a variety of circumstances. He cites two cases in which the uterus was found in position and in which a retroversion occurred a short time later due to constipation.

A slowly involuting or a subinvolved uterus abnormally movable after confinement and often associated with lacerations, is the condition which causes retroversion.

Lacerations of the perineum and of the cervix delay involution not only of the uterus but of the vagina. Of 25 primiparae lacerations occurred sixteen times, a frequency of 64 per cent, and in the 37 hospital cases lacerations occurred twenty six times or in 73 per cent, 48 per cent of the primiparae had a laceration of the cervix.

In 100 cases in which there was no retroversion there were 8 primiparae and 22 multiparae. Of the 78 primiparae lacerations of the perineum occurred twelve times, a frequency of 15+ per cent, and lacerations of the cervix 14 times or approximately 18 per cent, 63+ per cent of the multiparae had lacerations of the perineum. One patient had a complete tear through the phincter but no displacement of the uterus.

By avoiding lacerations by aiding the involution of the uterus by routine manual examination and the use of the knee chest position after the twelfth day the author believes that half of the retrodisplacements can be prevented. When retroversion does occur the treatment should be begun at once. C. H. DAVIS

Jeannin, C. and Levant, A. Prognostic Value of Study of Hemokoniæ in Icterus during the Puerperium (Contributions à l'étude de la valeur pronostique de la recherche des hémokoniæ dans les ictères de la puerpéralté). J. de med. 1904, 19: 2, 375.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb. Hemokoniæ discovered by Müller in 1896 can be studied especially well with the ultramicroscope. They appear in great numbers in the blood during fat digestion and from differences in their number conclusions can be drawn as to the function of the liver. With this in view the authors made blood examinations in intoxications of pregnancy and in puerperal infections. The examinations were made with the ultramicroscope.

In the first case there was marked icterus during pregnancy. After the giving of butter there were immense numbers of hemokoniæ in the blood which had not been present before, therefore no operation was necessary. The delivery was normal. The pernicious vomiting of pregnancy was present in the second and third cases. In both cases there

were only a few hamokonin in the blood—two to three in a field—therefore the prognosis was grave. Artificial abortion was performed followed by rapid recovery.

The fourth case was puerperal infection with icterus. There were no hamokonin in the blood. The patient died. Autopsy showed severe changes in the liver.

In the fifth case there was infection of the amniotic fluid there was slight icterus, but no hamokonin. Death ensued on the third day. There were marked changes in the liver which were demonstrable however only under the microscope.

Important conclusions can be drawn therefore both as to prognosis and treatment from the condition of the hamokonin. Lack of them always indicates severe lesions of the liver. KNOOP

### MISCELLANEOUS

**Pinard, A.: Signs and Diagnosis of Normal Uterine Pregnancy during Its First Half.** (Signes et diagnostic de la gestation utérine et normale pendant sa première moitié) *J. d'obst. et gynec.* 1914, xi, 193.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author discusses the signs of pregnancy that appear in the very beginning and are manifest in the uterus: (1) the cessation of menstruation and (2) the combined examination of the uterus by Puzos method. (3) pregnancy is very probable when there is ballottement on pressure. He could not demonstrate Hegar's sign in French women without using force in the examination. He believes that the soft parts of the uterus are much more elastic and compressible in German than in French women. STADLER.

**Franz, R.: The Antiproteolytic Serum Action in Pregnancy Labor and the Puerperium and the Significance of the Antitrypsin Method in the Serological Diagnosis of Pregnancy.** (Über die antiproteolytische Serumwirkung. Schwangerschaft, Geburt und Wochenbett und die Bedeutung der Antitrypsinmethode für die serologische Schwangerschaftsdiagnostik) *Arch. f. Gyn. u. Obst.* 1914, 570.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The author showed in an earlier work that the increase of the antitryptic serum titer is a symptom of pregnancy and the first two weeks of the puerperium. Although these experiments showed that in all probability there is an increase during the course of pregnancy and labor further experiments were necessary to complete demonstration.

With the aid of the Fuld Gross method and its modifications by Rosenthal and Pfeifer Franz tested the blood of 47 women at different periods of pregnancy labor and the puerperium. The titer curves show that in the great majority of the cases (33) the titer rises under normal conditions during pregnancy and labor and gradually sinks again during the puerperium. The rise during labor

occurs during the first and second stages while even during the third stage it sinks to a value that is almost as low as that at the end of pregnancy. When inflammatory diseases coexist with the pregnancy there may be a further rise. In two cases of eclampsia and one of dermatosis of pregnancy there was an antitryptic action which was increased over the normal.

The rise in the titer can be used in the diagnosis of pregnancy. It is not specific however. It is increased in any condition in which there is increased albumin metabolism such as nephritis, carcinoma. Basedow's disease, fever, suppurative processes and disease of the adnexa. At present it is not known whether Abderhalden's dialysis is preferable to the antitrypsin method on account of greater specificity. BERNHEIM.

**Abderhalden, E. and Fodor, A.: Further Study of the Presence of Foreign Proteolytic Ferments in the Blood of Pregnant Women.** Examined the dialysate with Ninhydrin and Determination of the Same Time of Its Nitrogen Content by Means of Micro-Analysis. (Weitere Untersuchungen über das A. freies Blutferment proteolytische Fermente im Blute Schwangerer Untersuchung des Dialysates mit N. Ninhydrin und gleichzeitiger Feststellung seines Stickstoffgehaltes mittels Mikroanalyse) *Münch. med. W. A.* 1914, 1765.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In this series of experiments the authors determine the catabolism or non-catabolism of placental albumin with sera from different sources not only with ninhydrin but by determining the nitrogen in the dialysate by Pregl's micro analytical method. The experiments showed marked agreement in the results from the two methods. Non pregnant patients almost always showed a somewhat lower nitrogen content in the dialysate. In some cases—cystoma and retroversion—this difference was considerable. The increase of the dialyzable nitrogen containing substances when the serum of pregnant women and placenta is brought together and the failure of this phenomenon when the serum of non pregnant persons is used shows very clearly that in the latter case the placenta is not catabolized. The author believes that Flatow is wrong in his assertion that all sera catabolize placental albumin. BRAUER.

**Echols, C. M.: Limitations of the Dialysis Method as a Practical Test for Pregnancy.** *J. Am. M. A.* 1914, 1914, 370. By Surg. Gynec. & Obst.

The author carried out the dialysis test for pregnancy in 93 women. 50 of whom were known to be pregnant. His results may be briefly summarized as follows:

The pregnant women of the series practically all gave positive reactions. In fact the last fifty women all gave positive reactions except one who was about two weeks pregnant as proved by an abortion 10 months later. The percentage of the non pregnant cases gave positive reactions. These included

several just operated on for acute or chronic appendicitis pus tubes fibroids and ovarian cysts

The dialysis test for pregnancy in its present stage of development is of value chiefly in a negative sense only that is, if a woman fails to give a positive reaction she is not pregnant. If on the other hand she gives a positive reaction we can only say she is probably pregnant for with the present technique from ten to fifteen per cent of non pregnant persons will give positive reactions

EDWARD L. CORNELL.

Leitch, A.: The Serum Diagnosis of Pregnancy and of Cancer a Critical Study of Abderhalden's Method. *B M J* 9 4 11 330

By Surg. Gynec. & Obst.

The author reports 100 cases tested for carcinoma in which 51 cases of known cancer gave only 55 per cent positive results while 49 known non malignant cases gave 37 per cent positive results. He concludes therefore that the method is without diagnostic value

He believes that the fundamental experiments upon which Abderhalden has based his hypothesis do not cover a sufficiently wide field. He thinks that many of the unexpected false results obtained by numerous workers have not been due as Abderhalden believes to improper technique. To demonstrate this point he considers all the errors that may be encountered in dealing with the substrate the serum and the dialyzer

He considers it impossible to render the placenta cancer tissue or other material used as substrate absolutely free of blood although Abderhalden requires that this shall be done to make the test successful. He has moreover observed that the water in which the substrate has been boiled occasionally gives positive reaction with a weak solution of nuxhydrin and non with a stronger and that successive boilings will sometimes develop a film at which reacts positively while the previous tests were negative. He is unable to explain these phenomena but considers that they materially vitiate his results. He has tested 39 sera with such inert substances as sterilized sponge kaolin and glass wool used as substrates and has obtained marked positive results. This convinces him that it is not so much the serum that puts up the substrate as it is the substrate acting by virtue of its physical properties that puts up the serum

Hamoglobin titrated serum is apparently harmful to some patients and apparently gives a smaller percentage of error than when absolutely clear serum is used. In the great majority of the author's cases the serum was obtained at operation or about 4 hours after the terminal. He found however that it gave no better result than the serum obtained while the patient was living or directly after death

The permittivity of the dialyzer was found not to be constant but to decrease or increase with

use. Consequently a thimble that had previously given a satisfactory preliminary test might be absolutely useless when employed with a suspected serum. The author believes that the only way to obtain reliable readings is to manifold the tests and controls and strike a just average. In his opinion a single test is worthless

He concludes that (1) the real fallacies of the test are beyond control and (2) that the hypothetical fallacies invoked by Abderhalden to account for false results have no basis in fact. F. C. IRTING

Engelhorn E. and Wintz, H. A New Skin Reaction in Pregnancy (Über ein neue Hautreaktion in der Schwangerschaft). *M. n. ch. med. W. ch. n. ch. med.* 1914, 121, 689

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The authors give a report and discussion of the pregnancy reactions published by Abderhalden, Weichardt and Rosenthal. All these reactions are based on the assumption that during pregnancy a foreign albumin is circulating in the blood of the organism. To demonstrate these hypothetical substances the authors made use of a cutaneous vaccination with an extract of placenta called placenta. The reaction is analogous to von Pirquet's tuberculin reaction and the luetin reaction. All pregnant women reacted positively and all mature non pregnant individuals negatively. Before menstruation in non pregnant individuals there was an irritation at the place of vaccination.

MOSSBACHER.

Adam, E.: Changes in Pregnancy and Labor (Über Änderungen in der Schwangerschaft u. Geburt). *U. nat. kr. f. Geb. r. ch. G.* 34 9 4 3331 803

By Zentralbl. f. d. ges. Gynäk. Geburtsh. u. d. Grenzgeb.

The inflammation of the retina in the kidney in inflammation of pregnancy is relatively rare. Usually the symptom is the seeing of only a dark spot when looking at a fixed object. With the mirror changes can be seen in the optic nerve and the retina. Complications during pregnancy are detachment of the retina and occlusion of the central artery or vein. The prognosis of albuminuric retinitis with regard to vision in later life is serious. Detachment of the retina has a better prognosis in pregnancy than at other times.

Interruption of pregnancy is justifiable in retinal changes and it is better to perform it before pronounced changes take place in the retina. If retinitis has begun the risk to the mother's sight is not so very great if the pregnancy is allowed to continue. The condition is different in uræmia.

Which the blindness is a cerebral one. Sudden blindness may occur in clampsia also generally it is preceded by a decrease in visual acuity and color vision. With the murmur no signs of increased intracranial pressure are detected but in about four per cent of the cases there are extensive hemorrhages in the choroid and thrombosis of the vessels of the choroid. Caution should be exercised in the

prognosis of these eye changes both with relation to the severity of the eclampsia and the later disturbances of vision.

FRANKENSTEIN

König, H.: *Medicolegal and Psychiatric Significance of Menstruation Pregnancy and Labor* (Beitrag zur forensisch-psychiatrischen Bedeutung von Menstruation Gravidität und Geburt) A. ch. Arch. d. Psychiat. 1914 10 685.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

If misdeemeanors of any kind are committed by a sexually mature woman an investigation should be instituted as to the relation in time between the act and her menstrual period. In certain cases it is well to place her under medical observation for one or better still several months. In each individual case a decision must be made as to whether her responsibility is decreased or annihilated.

When a crime or misdemeanor is committed by a woman during pregnancy her condition must always be taken into consideration. At this time any predisposition to abnormality may become manifest or be increased in intensity but even without predisposition tendencies to crime may develop at this time. Here also the degree of responsibility must be decided in each individual case. In crimes committed during labor twilight conditions due to unconsciousness and excitement or mania must be considered also stupor or twilight conditions based on hysteria also such conditions due to eclampsia and epilepsy as well as delirium from fever and pronounced psychoses. In such cases when there are any signs of aberration a mental examination should be made.

HANNA

Triepel H.: *Determination of the Age of Human Embryos* (Alterbestimmung bei menschliche Embryonen) Anat. f. s. 94 1 385.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Triepel agrees with the opinion of Frankel, Villen, Müller and others that ovulation takes place on the average 18 to 19 days after the beginning of the last menstruation that is about a week after the end of the period. On the basis of this research the prevalent ideas of the age of human embryos need correction. In a number of young ova and embryos Triepel tried to determine the age and compare the age by the old method with that by the newly reckoned term of pregnancy. He worked out a certain relation between the size of the embryo and its age. The formula  $a = 0.1$  in which  $a$  represents the age of the embryo in days,  $l$  the greatest length of the embryo in millimeters and  $n$  a factor that he has worked out.

GOLOSCHNIGER

Schmitz, W.: *Icterus Neonatorum* (Utersuchen gen. zur Pathogenese d. kindh. Icterus neonatorum) Dissertat. C. case 913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

In 1911 Heilmann made a large number of blood examinations in icterus neonatorum and his results had not been tested since until Opitz advised the author to take up the question again. Serological examination and Arneis's blood count were not

made. The author agrees with Hofmeier's haemopoietogenous theory of icterus neonatorum. He found the haemoglobin content specific gravity and erythrocyte count below normal and the more severe the icterus the lower they were. The same was true of the number of white cells but there was no variation from normal in the proportion of the different kinds of white cells there was even no decrease in the eosinophile cells.

Children three days old were selected and kept under examination for four days. The results of examination were the same on all four days. The absolute figures for haemoglobin specific gravity and red and white cells were always higher in the normal children than in those with icterus. The severer the icterus the lower the figures. In those with moderate icterus the weight increased from that of normal children and fell in those with severe icterus. Children with icterus need more nutrition. Nucleated red cells, which are rare in normal children were more frequently found in those with icterus often even on the fifth day. Frequent pictures of the blood of icteric children showed greater or less collections of unformed platelets.

FATTA LOZA

Tassius, A.: *Gonorrhoeal Ophthalmia Neonatorum Its Prophylaxis and Treatment* (Über Ophthalmia neonatorum ihre Prophylaxe und Therapie) F. u. M. 94 211, 98.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

Macroscopically cases of ophthalmia neonatorum are very much alike whether caused by gonorrhoea or not later in the course of the disease the differences appear which are due to the gonococcus, such as involvement of the cornea, more purulent secretion, etc. The causative agents of non gonorrhoeal ophthalmia are chiefly colon bacilli staphylococci, streptococci and pneumococci—the severest cases being due to pneumococcus infection.

The disease generally manifests itself on the sixth to the seventeenth day the cases that appear on the third to the fifth day are milder and are effectively treated with 0.1 per cent. bichloride solution. It is not always right to regard a late infection as an indirect one for many times the gonococci are deposited during labor in the meibomian glands where they remain viable for a long time and later reach the conjunctiva with the secretion. Prophylaxis with sterile water is not sufficient antiseptics must be used. As silver preparations in open containers generally cause a slight catarrh it is best to use Hellendahl's light proof ampoules, as the silver preparations kept in them are practically non-irritating.

EMMENTHAL

Vollhardt, W.: *Is It Possible to Distinguish Maternal and Foetal Bloods by the Newer Methods* (Ist die Unterscheidung mütterlichen und fötalen Blutes nach neueren Methoden möglich?) Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The differentiation of maternal from foetal blood may often be decided in case of suspected murder of

a child after illegitimate birth or criminal abortion Vollhardt has tried two methods that are very much under discussion at present and concludes that Abderhalden's pregnancy reaction cannot thus far be used for the purposes of legal medicine. It only gives certain results with fresh serum but fails in old, non sterile and hæmolytic sera and in extracts from blood spots even when Corni's modification is used, the reliability of which the author could not confirm.

Better and more accurate results are given by Neumann and Herrmann's biochemical method which however is not absolutely reliable from all points of view. It can only be certainly determined that it is foetal blood when the test is negative or when there is only a barely perceptible opalescent change in the alcoholic extract. If it is positive no definite conclusions can be drawn as to whether the blood came from a pregnant or non pregnant in individual, or whether it was a mixture of maternal and foetal blood that flowed together during delivery.

BAYER

Derease, F. Causes which Prevent Women from Nursing (Des causes qui empêchent les femmes d'allaiter). *Rev. prat. d'obst. et d'pédiat.* 94, 1915, 5.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

Statistics are given from Marfan's clinic 109 cases Baudelocques, 500 cases and Tarnier's 3,069 cases in regard to the capacity of women for nursing. Galactia or hypogalactia occurred in less than 1 per cent of the cases. Of the 80 to 85 per cent of the women who were completely capable of nursing only 3 per cent nursed their children. In the more prosperous classes on account of heredity and bodily weakness the incapacity for nursing is greater than among the working classes. The author studied the causes for not nursing in 100 cases at the Baudelocque clinic. In 80 cases the cause was the economic position of the women. In only 20 cases were there psychic or medical reasons why nursing was impossible. Prophylaxis and treatment could have overcome the incapacity in half of these cases. The economic grounds were ignorance in only a few of the cases in the greater number of cases the work of the women prevented them from nursing their children. Here efforts to further the nursing of the children should be instituted by the establishment of mother's rooms nursing homes, etc.

LAMER

Farenago, P. A Placenta Retained in the Abdomen for a Long Time after Extra Uterine Pregnancy (Ene nach 17 Monaten Gravidität lange Zeit nach Abbruch der Schwangerschaft). *R. d. G. u. G.* 94, 1915, 45.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

In January 1910 a full term macerated fetus was removed from a patient and it was said that the placenta was removed also. Extra uterine pregnancy had been diagnosed; the fourth month but

the patient had refused operation. In December 1914 the patient came to the author. There was a large fistulous opening in the scar in the midline which was 10 cm long. The hand could be inserted into the opening. A soft cauliflower like tumor the size of a child's head could be palpated through the fistula. Because of the abundant hemorrhage the patient was operated on *in extremis*. The tumor was removed and was found on macroscopic and microscopic examination to consist of unchanged placental tissue. The patient was discharged cured. The author concludes from this case that in extra uterine pregnancy the whole placenta should always be removed.

VON HOTS

Winter, G. Significance and Treatment of Retained Fragments of Placenta (Über Bedeutung und Behandlung retinierter Placentarstücke). *Monatsh. f. Geb. u. G.* 94, 1915, 597.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

From a study of the work published since the Strassburg Congress Winter comes to the following conclusions with regard to the significance and treatment of retained bits of placenta. Very frequently the retained fragments of placenta cause no local or general symptoms and when they do in the majority of cases it is only local endometritis with necrosis of the fragment of placenta. The retained placenta never of itself causes severe puerperal fever but it is possible that it furthers the infection that results from direct examination and medical procedures.

The uterus should not be curetted for diagnostic purposes in febrile puerperia for it causes disease in one-half to two-thirds of the cases and death in 7 to 9 per cent. Hæmolytic streptococci seem to be especially dangerous. Curettage should never be undertaken for fever but only for hæmorrhage. Retained pieces of placenta should always be removed immediately after delivery and during the puerperium in non febrile cases also in severe hæmorrhage in spite of fever. If there is no hæmorrhage ergotin should be given to further the spontaneous discharge of the retained fragments. If this is not successful further treatment should be determined by the result of bacteriological examination. Saprophytes indicate curettage virulent bacteria contraindicate it. It should be performed whenever possible with the finger never with sharp instruments.

A. CISTER

Agullon, L. The Coaxial Point of View (Considérations sur la position des basses coaxiales pour l'étude obstétricale). *T. de doc. Alger* 913.

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. d. Grenzgeb.

The coaxial pelvis does not have any certain, definitely described type such as Naegele's only but is obliquely contracted pelvis, but shows great variety in its form. In the course of the disease the factors that determine the ultimate form of the pelvis are the acute or slow onset of the disease.

its shorter or longer duration, the degree of the bone changes on the diseased and well side and finally the treatment long continued immobilization long continued extension immobilization combined with extension resection followed by pseudarthrosis or ankylosis.

Depending on the degree of each of the above factors and the combination of several of them, there result a number of forms of pelvis all of which can be classified more or less easily, in one or another of the following three groups (1) The obliquely contracted coxal pelvic pelvis with flattening of the diseased side (2) the obliquely contracted coxal pelvic pelvis with flattening of the well side (3) the pelvis symmetrically flattened on both sides. All these forms are pictured and described in detail in the original.

In the clinical diagnosis the author attaches special importance to internal examination and especially roentgenography by Bouchacourt's method as well as to external pelvic measurements. The prognosis for delivery is not dependent on the coxalgia of itself but on the kind and degree of pelvic contraction produced by it. It has been growing progressively better of recent years. The pelvic abnormality must be diagnosed before the eighth month of pregnancy.

The following are the methods of choice in treatment (1) Artificial premature delivery after the eighth month if the true conjugate is over 8.5 cm (2) pubiotomy in multiparae and when the true conjugate is less than 8.5 cm and more than 7 (3) caesarean section when the true conjugate is

less than 7 cm and when no living child has been born at previous deliveries.

Histories of five of the author's own cases are given. Three of them were delivered spontaneously one left the hospital before delivery and in one pubiotomy was performed with good results for mother and child.

LANGE

Untiloff: Effect of Pituitrin on the Uterus in Vitro  
(Zur Frage über die Wirkung des Pituitrins auf die isolierte Gebärmutter) Fisiol. Prof. Földi

By Zentralbl. f. d. ges. Gynäk. u. Geburtsh. u. d. Grenzgeb.

The rabbit's uterus shows automatic contractions after it is removed from the body every contraction forming a blunt cone on the curve. Under the influence of pituitrin the waves become higher and the pauses shorter. The effect of pituitrin begins after five to ten minutes varying with the irritability of the uterus. Generally the character of the contractions is not changed tetanic contractions appear only in exceptional cases.

There is no difference between the different preparations. Generally a solution of 1:1000 is strong enough. It is possible that weaker solutions would produce a certain effect. The best subject for the experiments is the uterus of a rabbit that has borne young preferably one which has been delivered within 8 or 10 days. The virgin rabbit's uterus contracts only slightly. The pregnant uterus cannot be used because contractions may be caused by the movements of the fetus.

JAVIER



# GENITO-URINARY SURGERY

## KIDNEY AND URETER

Grove E. H. A Nervous Symptom in a Case of Nephritis. *J. Lancet* 1914, 4, 332, 438  
By Surg. Gynec. & Obst.

Grove's patient a telephone operator aged 28 with little of importance in her previous history was taken sick with headache nausea and vomiting. The nausea disappeared but the vomiting continued. She was treated symptomatically by lavage rectal feeding, and eventually a light diet. Later she was under the care of a chiropractor for two months. During the third month an urinalysis was made and albumin found the usual treatment being prescribed. In the fourth month coming under the author's care the following were the findings of an examination: hemoglobin 93 per cent systolic blood pressure 30 mm urine sugar 10 to 18 alkaline much albumin no sugar triple phosphates hyaline casts quantity 1,000 ccm in twenty-four hours. The usual treatment was again prescribed plus rest in bed. So long as she kept in bed she was able to retain her food but when she arose vomiting returned. This vomiting came on soon after eating preceded by queer feeling which was relieved by vomiting but left her very hungry. Her weight diminished from 145 to 117 pounds.

During the ninth month another examination gave practically the same results. She was again put to bed and later allowed to be up and about. She was then given N. Wang's electrical treatment—negative head breech and Morton's wave current—during which time she was able to retain most of her meals. When the electrical treatments were discontinued she admitted vomiting as before but confessed that she could not do so by exerting all her self control.

In the discussion that followed the hysterical aspect of the case was thoroughly considered. It was pointed out that in chronic Bright's disease there are a variety of neurological disorders, both psychic and sensory. Bernard's famous experiment in which he produced albuminuria by irritation of the floor of the fourth ventricle was cited. Emphasis was laid upon the fact that chronic Bright's disease is a toxemia rather than a disease of the kidneys and that the brain and nervous tissues as well as the kidneys may be affected especially in subjects who use their nervous tissues excessively. One observer had noticed in a number of chronic cases of Bright's disease an intoxication so characteristic of Graves' disease that it was not until the urine was analyzed and the blood pressure taken or the eye ground examined that the true

nature of the disease was determined. The vomiting in this case was of a cerebral type and not unlike that present in acute exacerbations of hyperthyroidism.  
LOUIS L. TENNENBERG.

Tyler A. F. Urinary Calculi Valued of the X Ray in Their Diagnosis. *U. of S. Cal. Rev.* 1914, 3, 345.  
By Surg. Gynec. & Obst.

Tyler describes his technique for roentgenologic examination of the urinary tract which is similar to that generally in vogue. He emphasizes the necessity for careful preparation of patients previous to examination and further calls attention to the so-called old teakettle bladder in which there is a deposit over the entire mucosa of calcareous material—here the plate shows a diffuse shadow over the entire bladder region. He urges the use of the cystoscope for confirmation of findings. Four interesting cases of diagnosis by roentgenologic examination are reported and the following conclusions are reached:

1. The use of the radiograph in the diagnosis of the kidney, ureter and bladder stone is painless and should be emphasized in all suspected cases.

2. The X-ray findings are more accurate than those by any other method there being only one per cent of error under proper technique.

3. The use of the radiograph gives an accurate idea of the location, size and number of the stones.

4. In badly infected and aged subjects the radiographic method is painless and positive and often does away with the necessity of cystoscopic examination.  
J. S. EISENBAUM.

Grant H. H. The Management of Nephrolithiasis. *Los Angeles Med. J.* 1914, 9, 4, 221, 225.  
By Surg. Gynec. & Obst.

Grant reviews the subject of nephrolithiasis mentioning the generally discussed and accepted theories connected therewith.

His paper is divided into four sections:

1. How do stones form in the kidney?
2. What damage do they do?
3. How do we know they are there?
4. What is to be done about it?

He believes in an aseptic inflammation involving the pelvis and sometimes extending to the interstitial tissue of the kidney as a common result of the irritation due to the presence of stone which is usually present some time before infection takes place.

He holds the frequency of ascending infection through the lumen of the ureter but believes it reaches upward along the lymphatics of the ureteral wall and the loose connective tissues adjacent.

When stones are situated in the upper urinary tract they primarily have their origin in the kidney and migrate from there. They do not form in the ureter.

The real damage to the kidney substance and associated break in health follows sepsis with its resulting renal deficiency and absorption of pus products.

When stone is suspected a failure of the X ray to show it should not be accepted as conclusive but repeated examinations should be made and exploratory operation done if clinical indications point to a kidney lesion.

Operative mortality is high in cases with advanced sepsis and in actual pyelonephritis with multiple abscess the prognosis is dismal — as high as 30 per cent.

Grant favors direct operative approach to the stone and nephrectomy where the kidney is badly damaged.

FAXO R. CHURTON

Schildecker C. B.: *The Post-Operative Treatment of Urinary Lithiasis*. *Trans Am Obst & Gyn Soc* Buffalo 1914 Sept. By Surg. Gynec. & Obst.

The author believes that too little attention has been paid to the post-operative treatment of urinary lithiasis. The treatment instituted should be based on the chemical character of the stone as determined by an analysis. On this basis a certain dietetic and medicinal régime should be adopted which is best suited to lessen the possibility of the formation of a new stone or otherwise diminish the tendency of growth of a stone already present. The points covered by the paper were: (1) Kinds of calculi to be considered; (2) chemical methods for analysis of stone; (3) dietetic and medicinal treatment of each variety of stone.

Buerger L.: *Perirenal Hydronephrosis, Pseudo- or Subcapsular Hydronephrosis*. *Am J Surg* 1914, xxviii 566. By Surg. Gynec. & Obst.

Buerger calls attention to the rarity of the condition which ensues when the urinary secret on finds its way under the fibrous capsule of the kidney and dissects this away from the surface of the organ so that a pseudocyst is formed. To this lesion various names have been given the most descriptive being perirenal hydronephrosis, pseudohydronephrosis and subcapsular hydronephrosis. To the 23 cases recorded in literature the author contributes 120 that have come under his own observation.

In the first case there existed a congenital obstruction to the urinary outflow in the urethral tract in an infant nine months of age which was associated with undeveloped infantile kidney together with a hydronephrotic kidney. Upon nephrectomy a large subcapsular exudation urous containing a hydronephrotic kidney was revealed. Examination of the specimen demonstrated that a perirenal in the attenuated cortical substance of the hydronephrotic kidney had occurred, and through this, urinary extravasation took place under the capsule dis-

secting this away with the formation of a pseudo cyst.

The second case a boy 14 years of age had a history of a severe blow in the left upper abdomen and the back five years previous, followed by repeated attacks of renal colic. After a second traumatism over the same kidney a severe attack of lumbar pain followed, associated with vomiting and blood in the urine. Nephrectomy showed a large cystic tumor formed by the accumulation of a urinous exudate under the capsule a hydronephrotic kidney. The cortical substance presented a ragged perforation the organ lying free and mobile in the sac.

Briefly the author's two cases presented the following characteristics: hydronephrosis with marked attenuation of the renal parenchyma in both instances; in one case a distinct history of traumatism. In neither case were the clinical data sufficient to rouse even a suspicion of the exact anatomical lesion.

Loughnan F. M.: *Renal Sarcoma of Infancy*. *Brit J Surg* 1914, ii, 77. By Surg. Gynec. & Obst.

The author's report is based upon thirty six cases (26 autopsies) garnered from the principal London hospitals. In the decade 1901-1911 the death returns from the registrar general's office for cancer of the kidney and suprarenal capsule amounted to 987 of which 430 were under the age of five years and the balance from five to fifteen years showing a relatively high ratio in the infant.

**Symptomatology.** The patient appears pale, pale and emaciated in spite of the large abdomen which is oftentimes the first noticeable symptom. Pain in the loin or back was noted in only 8 of the 35 cases. Fever ranging from 99 to 101 degrees was the rule as is common in rapid sarcoma. A mild leucocytosis was observed in a few cases, and a cough probably coincident with lung metastasis.

**Urinary.** In the 37 cases hematuria occurred in 7 while under observation and in 4 additional cases a history of hematuria was obtained. Either hematuria or albuminuria was present in 10 cases. In adults on the contrary hematuria occurs in 90 per cent and as an initial symptom, in 7 per cent. The newer renal tests depend for their interpretation upon the relative output or findings in one kidney as contrasted against the other and so are of no value in infants. Seventy two per cent of the infant cases derive no benefit from analysis.

**Pathology.** In the 35 cases the disease was on the left side in 7 on the right 3 bilateral in one unrecorded in 4. Metastasis occurred in the liver in 4 omentum twice glands 3 times and lungs twice. In Jacob's 40 cases lesion was right-sided in 18, left-sided in 19, bilateral in 3. The tumor consists of a variety of sarcomatous elements (spindle or round-celled) the abdominal and other renal parenchyma. Muscle cells (normally found in the kidney capsule and the fat around the

collecting tubules) cartilage and epithelial pearls and ganglion cells are also occasionally found. These structures are very rarely true teratomata but more frequently teratoid the result of metaplasia (Adami). The epiblastic elements are generally limited by their basement membrane.

**Pr g oss** Eighty per cent are said to have had recurrences 70 per cent the first year. The immediate operative mortality was 7.7 per cent a reduction from 96 per cent in 1885. Out of 12 nephrectomies 2 died in six months from recurrence 1 in 3 months from phthisis 2 were alive and healthy 18 months afterwards. Four survived 3 years and in 3 cases the results were unknown.

LOUIS L. TENNENBAUM.

**Eisendrath, D. N. The Clinical Aspects of Renal Infection. J. Urol. Med. 1914, 1, 764.**

By Surg. Gynec. & Obst.

The writer says that in many cases of renal infection the local signs are completely overlooked because of the general symptoms of septic intoxication. Many cases are masked by the pseudo malarial chills and fever or a typhoid like course of temperature and tenderness and other symptoms of renal infection are so indistinct that the kidney is not considered as the source of the obscure fever.

The most reliable clinical evidences are obtained by the use of the cystoscope the ureteral catheter and the X-ray. Tenderness over the kidney may be elicited either by manual palpation or by palpation at the costovertebral angle. Pelvic lavage is of more assistance in the chronic case than in acute infection of the renal pelvis.

Infection of the kidney may take place by one or more of four routes or by a combination of several routes. The first the hematogenous or blood route second, the urogenous along the interior of the ureter where the micro-organisms migrate up in the stagnant column of urine into the pelvis of the kidney third the lymphogenous route i.e. from the lymphatics of the bladder to those of the ureter and up along the latter to the pelvis and into the lymphatics of the kidney and fourth by way of the connection of the lymphatics of the colon with those of the ureter.

Many cases of renal infection are dependent upon the presence of a calculus blocking the ureter. The reformation of renal calculi is not infrequent and must be considered in giving the prognosis of any case in which a calculus has been removed. Calculi are prone to reform as long as an infection is present since such kidneys are often the seat of a chronic colibacillus infection.

If the opposite kidney can functionate to both primary nephrectomy is to be preferred to a conservative method in all need cases of renal infection but conservatism should be the rule in all cases except those of the hyperacute type in these nephrectomy should be performed as early as possible while the acute form of the conservative methods should first be tried.

**Peacock, A. H. A Study of Twenty Cases of Renal Tuberculosis. Northwest Med. 1914, 1, 205.**

By Surg. Gynec. & Obst.

The possibilities of the present-day exactness in the diagnosis of kidney tuberculosis is touched upon by Peacock brief histories of twenty cases being shown part of which were proven operative and part non-operative. He considers that the cases practically always come late to the genito urinary surgeon because of the primarily misunderstood cystitis treatment by the practitioner. The claim is made that renal tuberculosis is always secondary to a focus elsewhere in the body and that attention should be directed to the primary focus as well as the secondary kidney focus in the diagnosis and treatment of the case.

After studying these twenty cases Peacock is impressed with the following findings:

The tubercle bacillus was found in the urine in 19 out of the 20 cases.

Hæmaturia which usually occurred early appeared in 60 per cent.

The sexes are about equal 1 males and 9 females.

The average age was 26 the youngest case being 14 years of age the oldest 43.

In 6 per cent of the cases the primary lesion was found outside the kidneys in the examination.

In 60 per cent a bilateral infection was proven. In these bilateral cases he considers that the presence of one competent kidney should be assured before nephrectomy is done because of the great danger of the remaining kidney's destruction later.

C. E. BARNETT.

**Deaderick, W. H. The Tests of Renal Function. J. Urol. Med. 1914, 1, 47.**

By Surg. Gynec. & Obst.

The author gives a well-ordered review historical and technical of all the commonly recognized excretory and retention tests of renal functional activity. His conclusions are as follows:

1. The phenolsulphonephthalein test is simpler than other functional tests and the drug is non-irritating and non-toxic.

2. The total amount of work of both kidneys is accurately shown by delay and diminution of excretion.

3. The relative efficiency of each kidney is determined by analysis of the segregated urines.

4. The test is of great importance in cardiovascular disease by indicating the organ most at fault.

5. Valuable prognostic data may be gathered by the application of this test.

6. Absolute reliance should not be placed upon any functional renal test results should be correlated with clinical findings. H. W. PLACAMMEYER.

**Keene, F. E. and Pancoast, H. H. The Present Status of Pyelography. J. Urol. Med. 1914, 1, 53.**

By Surg. Gynec. & Obst.

In order to avoid untoward results of collateral injection the authors recommend that the greatest

care be used regarding asepsis. The ureteral catheter should not exceed No. 6 in size should be smooth of surface pliable and not slit-tipped. The catheter is inserted 20 cm and its further progress made slowly until the slightest buckling occurs when it is withdrawn 1 to 2 cm and the urinary outflow examined to determine if possible the presence or absence of pelvic dilatation.

The catheter is then withdrawn 10 cm and the injection made. If the urine is blood-stained the injection is deferred for seven days. When an obstruction is encountered along the ureter forcible attempts to overcome it are not made; a smaller catheter is used and if its passage is likewise impeded collargol is injected and in the majority of cases will find its way upward.

The authors are opposed to simultaneous injection of both kidneys. The collargol is freshly prepared for each case and varies from 5 to 10 per cent depending upon the thickness of the abdominal walls. In making the injection they use a 30 ccm. burette connected with a short tube and stopcock. To start the flow the burette is elevated three feet but is immediately lowered and the fluid allowed to flow in at an elevation of not more than one foot with a No. 6 and two feet with a No. 5 catheter. The injection is discontinued when the column of collargol ceases to fall or the patient experiences the slightest sensation of fullness in the kidney region. After the picture is taken the collargol is drained off and the catheter removed. When retention from angulation of the ureter due to ptosis is suspected the patient is required to remain in bed twelve hours after the injection. This facilitates free drainage of any collargol that may remain in the pelvis of the kidney.

Pyelography should be employed only after the usual method have failed. The authors are opposed to its use in depicting interesting anomalies and to its indiscriminate use in all types of renal pathology.

The pyelograph is useful in detecting the earlier stages of hydronephrosis due to mechanical blocking of the ureter other than that caused by a stone also in horseshoe and dysplastic kidney and in rendering a calculus sufficiently opaque to cast a perceptible shadow when it was not detected by the simple roentgenoscopy alone. HARRY A. KRAUS

Ferguson S. W. Pyelitis in Infancy. *Med J* 4  
Ital 1941 105 By Surg. Gynec. & Obst.

The author's report which is based on a series of 45 cases, all of which occurred in females is at variance with some of the recent articles in which large numbers of cases occurring in boys have been reported.

In regard to the mode of infection the author believes the evidence points to an ascending infection from the urethra. The factors speaking for this are its frequency in the female its usual appearance during the napkin period and the fact that in a large percentage of the cases the symptom

of pyelitis are preceded by definite intestinal disturbances and frequent motions.

The author was able to obtain the usual history of intestinal disturbance in his series of cases. One of the important points brought out in this paper is the statement that no examination of a febrile child is complete when no cause for the rise in temperature is found without a microscopic examination of the urine. Attention is also called to the fact that there are seldom any symptoms pointing to an involvement of the urinary tract. He believes that in some of the cases the incidence of the toxin falls on the nervous system, and he further states that head retraction and Kernig's sign may sometimes be present.

In the treatment of these cases the author is in favor of the alkaline treatment relying generally on either sodium or potassium citrate. When he administers urotropine he gives it in association with the acid phosphate of sodium or ammonium benzoate and diluted with large quantities of water. The author does not enter into a detailed discussion of vaccine treatment as he believes vaccines are rarely necessary but may be of value in a case in which the condition has been unrecognized for a long time or in prolonged cases to supplement the alkaline treatment. The histories of the two fatal cases in his series are given.

HERMAN L. KRETSCHMER.

Pennock W. J. Chronic Pyelitis. *Verh. Deutsch. Med. Ges.*  
1941 30 By Surg. Gynec. & Obst.

The usual signs and symptoms for diagnosing non-tubercular pyelitis are discussed. Pennock considers the following findings essential for a diagnosis. An approximately normal amount of urine should be secured from either kidney with a normal specific gravity from each with a normal urea excretion. Pyelitis should appear at the normal time followed by a normal quantitative excretion in a given time and the urine from one or both kidneys should contain pus.

Irrigations with a strong solution of silver nitrate is adopted in the treatment. One case of gonorrheal pyelitis was cited in which a ten per cent collargol pyelography proved sufficient to eradicate the infection. C. E. BARNETT

Woolsey G. Some Problems in the Surgery of the Kidney. *Am J Surg* 4, series 203  
By Surg. Gynec. & Obst.

In a general survey of the entire field of kidney surgery Woolsey arrives at several clearly stated conclusions. The kidney is injured upbreatedly more frequently than any other organ but the cortical laceration does not cause urinary extravasation. This only accompanies rupture of the pelvis or calices.

He treats cases peculiarly except those presenting severe clinical picture or those in which there is infection of the lower urinary tract. As a rule bullet wounds require peritoneal incision.

much as the peritoneal cavity is usually invaded. Lumbar drainage is always advisable.

Any other treatment than surgical is a failure in tuberculosis of the kidney. The author believes that tuberculin is a waste of time and that climatic treatment gives an enormous mortality. He quotes Wildbolz who reported 116 cases treated non-surgically in Switzerland. Only ten per cent lived over five years; only five per cent had no symptoms over five years; and only one case was well in every respect.

But few if any specimens of healed tuberculous kidney are found while they should be not uncommon if spontaneous recovery is common.

He does not believe that partial nephrectomy is ever permissible.

The X-ray while now an indispensable adjunct to diagnosis often fails to reveal stones. In one case a bladder stone one and one half inches in diameter was determined by cystoscopy where the X-ray failed utterly to show a shadow.

Differentiation between appendiceal and renal conditions will depend largely on clinical symptoms. There is a tendency toward neglecting this phase of study. Every diagnostic agency such as the X-ray and urinary studies should be resorted to before the operative procedure is determined upon.

He has used the transverse incision of the kidney for the removal of stone believing that it damages less kidney tissue than the longitudinal.

FRED R. CHARLTON

Zondek, H. Experiments in the Decapsulation of the Kidney in Rabbits with Bichloride of Nephritis (Experiments in the Decapsulation of the Kidney in Rabbits with Bichloride of Nephritis). *Zentralbl. f. d. ges. Chir.* 1913, 41, 11.

By Zentralbl. f. d. ges. Chir. u. Grenzgeb.

Harrison recommended nephrectomy for the decrease of intrarenal pressure and its sequelae but Edelblut substituted for it the less dangerous decapsulation. This operation has been used not only in scarlet fever nephritis and purpura eclamptica but in acute forms of nephritis and in angoneurotic hemorrhage of the kidneys. A considerable number of authors have had excellent results from it. Zondek used the method experimentally in kidneys coagulated by pressure on the pedicle and found that decapsulation of the acutely swollen kidney caused a decrease in the intrarenal pressure. The discharge of drops of blood and serous fluid observed on decapsulation he called bleeding of the renal lymphatics. Then he undertook a study of the effect of decapsulation on kidneys not artificially swollen. Bichloride seemed to him the best agent for producing the kidney lesions as the swollen condition of the kidney produced by bichloride poisoning is very similar to that produced by the toxins of various bacteria—cholera bacillus, colon bacillus, typhoid bacillus, pneumococcus and diphtheria bacillus. The highest dose was 0.5 mg. the lowest 2 mg. of bichloride.

As experimental and control animals he used rabbits with an average weight of 1 kg. He found on extirpating the kidneys during life that the decapsulated kidney weighed 0.7 to 4.6 gms. more than the non-decapsulated one. The differences in weight are about proportional to the amount of bichloride injected and the time of its action before the extirpation of the kidneys. Though the non-decapsulated kidney contained more blood than normal its blood content was small as compared with that of the decapsulated kidney. The differences in weight disappeared in animals that died spontaneously when the motor that drives the blood into the kidney was excluded. Microscopic examination showed that increase in the size of the parenchyma cells was not responsible for the increase in weight. Therapeutically decapsulation of the kidney not only decreases intrarenal pressure but also gives the best opportunity for a more complete irrigation of the kidney with blood and for abundant diuresis.

SAMINGER

Guerry, L. Injury of the Vena Cava during Nephrectomy. *J. S. C. M.* 1913, 9, 576.

By Surg. Gynec. & Obst.

In the removal of three large pyonephrotic tumors one of which contained a large calculus Guerry accidentally included a portion of the vena cava when the stump was clamped *en masse* and severed. Clamps were applied to the breach in the cava which entirely controlled the hemorrhage. They were loosened the seventh day and removed on the eighth day. All three cases recovered and with the exception of the second case no evidence was present to indicate by edema that a block had occurred in the vena cava.

In reviewing the history the author found 20 cases in which 7 were controlled by the clamp method while the others had either ligatures or sutures applied.

A case from Peltesohn describes the suture of the vena cava following the removal of a kidney cancer. The patient recovered, free from acute symptoms showing perfect permeability of the cava.

An interesting case is reported from Delanau in which the vena cava was entirely severed during the removal of a tubercular kidney. Ligatures were placed around both above and below the cava. Edema while present was not marked. Collateral circulation occurred through the renal mammary, renalzygomatic and utero-ovarian (Robinson's) circle. Recovery progressed perfectly. The re-establishing of the utero-ovarian circulation rekindled a uterus that was in a quiescent menopause into a renewed menstruation. C. E. BARNETT

Butler, F. A. A Case of Primary Carcinoma of the Ureter with Sciatica. *Clin. M. B.* 1913, 4, 48.

By Surg. Gynec. & Obst.

The patient a bookkeeper aged 53 was admitted to the sanatorium October 14, 1913, complaining of sciatica. His father died of cancer of the stomach. The patient had always had good health.

until 19 months before when his present illness began with an attack of hematoma lasting one week. Twelve months later he had a second similar attack. There was no pain, passage of gravel or other symptoms suggesting renal colic. A few months later the patient had incontinence of urine for relief of which an intra urethral operation was performed in April 1913. This was followed by painful urination and a swelling of the right testicle. At this time he was told there was sugar in his urine and a diabetic diet was prescribed.

The present back pain had been troubling him for six months. There was a marked tenderness of the right sacro iliac articulation and constant pain in the region of the right sciatic notch radiating into the right groin and down the outer aspect of the thigh where it was most severe and constant.

There was no history of trauma. The patient had had a gradual onset and had become continually more severe requiring on an average 10 grains of morphine daily. He was pale and emaciated and in nineteen months he lost weight from 160 lbs to 125 lbs. His skin was lax and flaccid, his tongue presented a thin dark brown coat, his breath was foul and his throat somewhat reddened. The physical reaction was normal. Temperature varied from 97 to 99, pulse 60 to 100, respiration 16 to 25.

There was no glandular enlargement and the heart and lungs were normal. Abdominal palpation revealed a firm, smooth, rounded, non-tender, movable mass about three inches in diameter just to the right of the umbilicus.

The right testicle was symmetrically enlarged to three or four times the normal size. Rectal examination was negative.

The urine contained a few hyaline casts and a slight trace of albumen. There was no evidence of intestinal obstruction. The stools showed a blood. Blood pressure was normal. Hemoglobin 3, white count 11,000, red count 4,544,000, differential normal. X-ray examination of the sacro iliac region was negative. X-ray uroscopy was negative. Cystoscopy revealed no abnormality of the bladder but on ureter catheterization the right ureter was found to be obstructed 6 cm from the orifice. Washings obtained by the injection of boric acid solution were stained for tubercle bacilli with negative results. Von Pirquet test was negative. The phenolphthalein test resulted in the appearance of the dye from the left ureter in eight minutes but none from the right — 1 per cent was recovered the first hour and 45 per cent in two hours. A preliminary diagnosis of sarcoma of the right ileum was made. The hematoma and right ureter obstruction were explained as being due to infiltration of the ureter from without.

A preliminary operation was performed November 22d. A tumor palpated just posterior to and below the right kidney, seeming to spread over the anterior surface of the sacrum and ileum. It was quite extensive and firm but not of bony consistency.

A specimen was excised for examination. The pathologist reported it to be carcinomatous.

The result of the operation and pathological findings, added to the previous findings, led to a diagnosis of primary carcinoma of the right ureter.

The patient made a good recovery. The abdominal incision healing rapidly. Pain was markedly decreased, requiring only one quarter grain of morphine daily. On December 12th the right testicle was removed its involvement being regarded as metastatic. The tumor was found to contain only normal tissue. The patient declined rapidly and died December 20th.

Autopsy revealed an extensive mass of carcinomatous tissue obliterating the central half of the right ureter infiltrating the psoas and iliac muscles, the posterior peritoneum, the nerves of the lumbar plexus and the perirenal tissue. The right kidney was atrophic and not in view. The left kidney was normal. There were no metastases in any of the organs. The neoplastic tissue extended by continuity down the right ureter within 6 cm of the bladder orifice. This tissue was separated by a strip of normal ureter 4 cm in length, from a mass of carcinomatous tissue which had entirely infiltrated the lowest 2 cm of the ureter and was in contact to the extent of 2 mm into the bladder.

The scarcity of literature on the subject is noted. The seven cases collected by Metcalf and Safford are said to be the only cases in literature to date.

In the report of six cases of primary carcinoma of the ureter by Rundle, Albratan, Uvaker, Heksten, Wassing and Blum, Rokotanski and Halse, the symptoms and findings were essentially similar to those in this case, namely, hematoma dissociated from pyuria, pain largely sacral, presence of tumor and ureteral obstruction.

H. G. HANNA.

#### BLADDER, URETHRA, AND PENIS

Pike, J. B.: Perforation of the Bladder from Chronic Ulceration with Secondary Appendicitis. *Practitioner* Lond 1914, 93, 92.

By Surg. J. G. & Otol.

The author reports a rare case of perforation of the bladder complicated with appendicitis. The patient, a deaf mute 73 years old, was admitted to the hospital on account of abdominal pain and a lump in the right iliac fossa.

An operation for appendicitis was made on the day of admission. On incision of the peritoneum dense adhesions were found around the caecum and while these were being separated a small stream of clear fluid which proved subsequently to be urine issued from the wound. The appendix was found to be very large and in a mass of adhesions the stump was tied and a large drainage tube inserted.

The patient lived nine days after the operation during which time he passed no water naturally, catheterization being difficult.

The post mortem findings were: Bladder deep

in the pelvis, thickened and contracted small star shaped calculus in the bladder which had caused ulceration through the mucous and muscular coats of the bladder its peritoneal covering being distended into a long peritoneal cyst which had ruptured when the attempt was made to separate the adhesions.

THEO DROZDOWITZ

# GENITAL ORGANS

Corner E. M.: Further Experiences of the Treatment of Imperfectly Descended Testicles  
Am J M Sc 1914 vol 51

By Surg. Gynec. & Obst.

Corner refers to his paper published in the British Medical Journal in June 1904 in which he discussed the advisability and value of the operations performed for relief of undescended testicle and in this paper makes a summary of his experiences since then.

First he advises that there need be no particular hurry to perform this operation except under certain conditions, viz (1) the recognition of a hernia accompanying the imperfect descent or (2) the recognition that the imperfect descent is not mere belatedness.

He emphasizes the fact that in separating the sac from the cord in cases of hernia accompanying undescended testicle great care must be taken not to injure the blood vessels on account of the subsequent danger to the nutrition of the testicle.

He claims that it is not as a general rule imperative to operate before the age of seven years. He says the operation may be done in one of three ways.

1 The accompanying hernial sac may be divided and stripped of the cord allowing the testicle to descend into the scrotum. Any but the mildest scrotal fixation is merely a prelude to failure anatomical or physiological. Such an operation is called an orchidopexy or an orchidopexy.

2 The gland may be removed as advocated by many. This line of treatment is especially indicated when the imperfect descent is unilateral. It is satisfactory in its after results. The operation is an orchidectomy.

3 Especially when the condition is bilateral, the gland may be returned to the abdomen intraperitoneally. Any internal secretion which the gland may have which will aid the patient to develop sexual character such as hair on the face, male voice, male body energy of mind and body is retained. Such an operation is an orchidoceloplasty.

In suitable cases the author seems to favor the returning of the testicle to the abdomen and gives the following principles favoring this procedure.

1 It has been urged on theoretical grounds that the returned testicles are prone to become malignant. This is not so.

2 It has been urged that in the intra-abdominal position such common diseases as gonorrhoeal orchitis endanger life. This is not so.

3 Apparently the intra abdominal position abolishes any external secretion but preserves and encourages the internal secretion an important point as it is in the internal secretion above that practically the whole value of the imperfectly descended testicle lies.

The author tabulates his results as follows: Orchidopexy about 10 per cent, orchidoceloplasty about 50 per cent, orchidectomy 40 per cent.

He draws the conclusion that orchidopexy fails more frequently from atrophy of the glands than by not retaining that gland in good position.

At birth and up to the age of about five years the case should be watched to decide whether the testicle is merely late in its descent or not. If a hernia is seen to be present an operation should be performed followed by an orchidopexy.

From seven to twenty years of age an operation should be done whether a hernia is present or not. In orchidopexy an orchidectomy or an orchidoceloplasty should be done.

Above twenty years of age an orchidectomy should be done.

A. C. STOKES.

Lydston G. F.: Transplantation of a Testicle from the Dead to the Living Body. N. Y. M. J. 1914, 67.

By Surg. Gynec. & Obst.

Lydston lays down the proposition that various skin diseases notably psoriasis are a promising field for the therapeutic administration of the sex gland hormone by way of implantation. He continues the discussion on the proposition that these diseases are primarily an aberration of quality and quantity of internal secretion and therefore that implantation may be benefited by implantation of sex glands.

He states that a paper will shortly appear in the New York Medical Journal in which he will suggest that arteriosclerosis, chronic renal disease, diabetes, tuberculosis and even carcinoma may be aided by this kind of a transplantation.

He cites a case in which he transplanted an entire testicle into the scrotum of a man who had large patches of psoriasis on his back and arm. This testicle was obtained from a dead man thirty hours after death and transplanted ten hours afterward. The lesions on the arm and back disappeared at the end of eight days.

The author wishes to submit without comment this brief preliminary report of the result of the primary or initial dose of sex hormone and promises a more complete discussion in the future.

A. C. STOKES.

# SURGERY OF THE EYE AND EAR

## EYE

Fowler W W Ophthalmia Neonatorum Tex  
M Yeu 914, xxii, 737 By Surg Gynec & Obst.

The author refers only to ophthalmia neonatorum of Gram negative gonococci. The disease breaks out three to five days after birth if it breaks out after that time it is probably due to extragenital influences.

He urges that care be used in opening the child's eyes for examination as the pus under pressure may squirt into the physician's eyes with dire results.

The most feared complication is ulcer of the cornea with subsequent perforation and its severe effects on the eye frequently result in blindness.

Statistics show that the instillation of a per cent silver nitrate in the eye at birth positively cuts this disease to the minimum.

The author objects to the use of boracic acid because of its irritating acid properties instead he uses a one per cent borate of soda solution. He instills 10 per cent argyrol every 15 minutes for 36 to 48 hours. He condemns the rough handling of the lids as having a tendency to start fatal ulcers. He also opposes the use of hot and cold applications as he thinks they do no good and may do harm.

S S Querry

Holloway T B: Peripheral Pigmentation of the Cornea Associated with Symptoms Stimulating Multiple Sclerosis. *Am J M S* 9 4, 131-135 By Surg Gynec & Obst.

The author reports a case of peripheral pigmentation of each cornea the symptoms of the patient warranting a diagnosis of multiple sclerosis. He cites other cases by Kayser 1903 Fleischer 1900 Volsch 1911.

Holloway had his patient thoroughly examined for a probable cause of the pigmentation in conjunction with his symptom. His conjectures—curbosis of the liver and a tremor affecting the extremities and head—may be an incentive to the investigator to look for a peripheral pigmentation of the cornea.

L J Golsbach

Harkness, C. A. Convergent Squint and Its Treatment. *Clinique Chicago*, 9 4, xxx, 44. By Surg Gynec & Obst.

Convergent squint usually appears in childhood. The causes are weakening of the external rectus due to debilitating disease, incorrect attachment of muscles, peripheral paralysis, central lesions and amblyopia.

Treatment is divided into two classes—operative and non-operative. Of the operative either simple

tenotomy of the internal rectus or tenotomy with advancement of the external rectus is to be preferred. Of the non-operative methods, early and correct placing of glasses usually cures. The use of prisms and exercising of muscles alone is to be condemned.

In conclusion Harkness emphasizes the importance of eradicating the false impression that children will outgrow squint without proper treatment. Early wearing of correctly fitted glasses will not only correct but will save vision. Surgical means should be used as a last resort.

S S Querry

Mosher H P. The Orbital Approach to the Cavernous Sinus. *Laryngoscope* 9 4, 21-23. By Surg Gynec & Obst.

With this plan of operation the globe of the eye is removed and the orbit cleaned out. The ophthalmic artery is then tied off, the perosteum cleaned from the posterior half of the floor of the orbit and the groove recognized in which the superior maxillary nerve runs. The next step is to separate the perosteum of the orbital surface of the great wing of the sphenoid and recognize the outer end of the sphenoidal fissure. With the chisel placed vertically a cut is made through the orbital plate of the great wing of the sphenoid from the notch of the superior maxillary nerve to the outer end of the sphenoidal fissure above. The bone here is thin and easily removed. With the rongeur or the chisel an enlargement is made outward one and one half centimeters and a window is made flush with the floor of the orbit. (Important) The dura is then elevated from the floor of the middle fossa, working from the outer boundary of the bone window inward.

On the cadaver the dura can be separated from the outer wall of the cavernous sinus for a distance backwards of about a centimeter—then separation becomes hard. If the elevation is persisted on, a pus head opening is torn in the outer wall of the sinus at the level of the bottom of the bone window. Above and beyond this point of adhesion between the outer wall of the sinus and dura the two can be separated for about a centimeter further where the ophthalmic division of the fifth nerve from the gasserian ganglion halts the separation. If an attempt is made to separate the inner wall of the sinus from the outer wall of the sphenoid bone the knife may have to be used to start the separation but once started it is easily carried back to the limit of the sinus. The penetration about that the exposure of the outer wall of the sinus is the better a preferred procedure. One centimeter the being exposed a blunt-pointed knife is placed against the outer wall of the sinus at a level with the floor of the orbit.



The blade is carried forward to the body of the spheno-d until it is stopped by bone. This opens the wall of the sinus for one centimeter and the opening is well below the internal carotid. A small curette could then be carried back through the whole body of the sinus the distance being about three to four and one fourth inches from the rim of the orbit. S. S. QUITTER

### EAR

Coates, G. M. Bacterins in the Treatment of Diseases of the Ear. *Laryngoscope* 1914 xxi 677  
By Surg. Gynec. & Obst.

Since first brought out by Wright bacterin therapy has been used in attempts to cure diseases of the ear just as it has been tried for every other ailment of infectious origin. A résumé of the work done in this direction during the past four years as shown by reports of Levy Graef and Wynkoop Dwyer Still MacDonald Huvelle Christu Sherman West McKernon and Kolmer and Weston indicates a fair amount of success in the use of bacterins in suppurative middle ear disease furunculosis and chronic eczema of the external canal. The most important works quoted however were those of Nagle, of Boston papers read before the American Laryngological Rhinological and Otolological Society in 1910 and the Ninth International Otolological Congress in 1912. In these two papers sixty five cases of chronic suppurative otitis media were reported with practically but one failure.

The author gives his own experience as follows dividing his cases into acute and chronic and again into those treated with autogenous and with mixed commercial bacterins. In the former class there were five cases of acute suppurative otitis media and all cleared up promptly with autogenous vaccines, although the well marked mastoid symptoms in each. Attention is called to the fact that very possibly these cases would have recovered just as promptly with other methods of treatment although they had all resorted up to the time that the vaccines were administered and after that promptly convalesced.

In chronic middle suppurative in five cases were treated with autogenous vaccines with three apparently cured and two improved. An attempt was made to ascertain the value of mixed commercial bacterin and the conditions were made as hard as possible in order to see what could be accomplished by the physician who was without laboratory assistance. Therefore no cultures were made to determine the organism no other treatment was used and the dosage was regulated by clinical observation.

The Social Service Department of the Hospital insured regular attendance for treatment and for verification of results. There were no serious complications observed and but little local or general reaction as a rule. Treatment was given at from two to four day intervals and the dosage was usually doubled at the second and third with 5 to

three cases were treated and of these 56 were apparently cured. The ears became dry and remained so up to the time of the report varying periods up to six months. Two cases were improved only and five were unsatisfactory. In this series of 63 cases 17 were acute or subacute and 46 were chronic and had resisted all other methods of treatment short of the radical operation. It was in the latter class that the 5 failures were recorded.

The author concludes that while there is yet much work to be done in this line bacterin therapy in diseases of the ear is a distinct addition to the armamentarium of the otologist for combating these diseases.

Lutz, S. H. How the Patient Can Help Himself in Cases of Chronic Catarrhal Otitis Media. *Ann. Otol. Rhinol. & Laryng.* 1914 xxiii 377.  
By Surg. Gynec. & Obst.

In the study and treatment of cases of chronic catarrhal otitis media it is necessary to bear in mind the importance of a consideration in detail of the general condition of the patient, as well as the local condition of the nose and nasopharynx.

It is of paramount importance to instruct these patients how to clear the nasopharynx and blow the nose without causing a rarefaction or pressure of the air in the nasopharynx and thus cause a disturbance of the air pressure on the membrana tympani. ELLEN J. PATTERSON

Wilson, W. Two Unusual Cases of Mastoiditis in Children. *Bull. M. J.* 9, 4, 11 308.  
By Surg. Gynec. & Obst.

The case is reported of a child two years of age who had a sudden attack of mastoid pain with slight edema above and behind the auricle normal membrana tympani but with no marked constitutional symptoms. At operation three days after the onset a subperiosteal abscess was found communicating with the antrum through a fistula in the outer antral wall. The superficial air-cells of the squamosa were to a great extent infiltrated with pus but there were no signs of middle ear suppuration.

Another child eight years of age recovering from pertussis developed slight unilateral mastoid edema there was thin watery pus in the external meatus with no perforation in the membrana tympani though the external canal was swollen. There were no severe constitutional symptoms and no indications of intracerebral involvement. At operation no pus was found in the antrum or middle ear the lateral sinus was normal but upon opening the posterior fossa through the antral wall the tense wall of an abscess was perforated and two ounces of the thick white pus was liberated.

Recovery was rapid. No pus in the antrum or perforation in the membrana tympani after discharge.

The author's theory is that the whole tract from the membrana tympani to the dura was simultaneously

# SURGERY OF THE EYE AND EAR

## EYE

Fowler W W: Ophthalmia Neonatorum *Tx*  
*Am J Surg* 1914 *xxii* 737 By Surg Gynec & Obst.

The author refers only to ophthalmia neonatorum of Gram negative gonococci. The disease breaks out three to five days after birth if it breaks out after that time it is probably due to extragenital influences.

He urges that care be used in opening the child's eyes for examination as the pus under pressure may spurt into the physician's eyes with dire results.

The most feared complication is ulcer of the cornea with subsequent perforation and its severe effects on the eye frequently result in blindness.

Statistics show that the instillation of a per cent silver nitrate in the eye at birth positively cuts this disease to the minimum.

The author objects to the use of boracic acid because of its irritating acid properties instead he uses a one per cent borate of soda solution. He instills 10 per cent argyrol every 15 minutes for 36 to 48 hours. He condemns the rough handling of the lids as having a tendency to start fatal ulcers. He also opposes the use of hot and cold applications, as he thinks they do no good and may do harm.

S S QUINTER

Holloway T B: Peripheral Pigmentation of the Cornea Associated with Symptoms Simulating Multiple Sclerosis *Am J Surg* 1914 *xxii* 13  
 By Surg Gynec & Obst.

The author reports a case of peripheral pigmentation of each cornea the symptoms of the patient warranting a diagnosis of multiple sclerosis. He cites other cases by Kayser 1902 Fleischer 1909 Volsch 1911.

Holloway had his patient thoroughly examined for a probable cause of the pigmentation in conjunction with his symptoms. His conjectures—curbosis of the liver and a tremor affecting the extremities and head—may be an incentive to the investigator to look for a peripheral pigmentation of the cornea.

L J GOLDBACH

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S S. QUINTER

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On the cadaver the dura can be separated from the outer wall of the cavernous sinus for a distance backwards of about a centimeter—then separation becomes hard. If the elevation is persisted in, pain and opening is torn in the outer wall of the sinus at the level of the bottom of the bone window. Above and beyond this point of adhesion between the outer wall of the sinus and dura the dura can be separated for about a centimeter further where the ophthalmic division of the fifth nerve from the gasserian ganglion halts the separation. If an attempt is made to separate the entire wall of the sinus from the outer wall of the sphenoid bone the knife may have to be used to start the separation but once started it is easily carried back to the limit of the sinus. Experimentation shows that the exposure of the outer wall of the sinus with the better deferred procedure. One centimeter then being exposed, the pointed knife is placed again at the outer wall of the sinus on a level with the floor of the orbit.

had been unconscious for several hours, having been rendered unconscious by vomiting headache and ~~convulsions~~.

Upon admission the patient was restless. There was a foul ~~pus~~ discharge from the left ear the posterior canal was ~~filled with pus~~. There was no nystagmus, and the ~~fundus~~ pupils were equal and the ~~temperature~~ temperature was 97.4 pulse 60. The patient complained of cerebation ~~was not~~ a puncture was made and the blood ~~was not~~.

No brain abscess could be located ~~at this time~~ so a radical mastoid was done. For ~~the next~~ temperature was 102 pulse 110. There was ~~no~~ of the left external rectus muscle ~~plus~~ the upper lid beginning optic ~~neural~~ severe headache and at times ~~unconsciousness~~.

The dura was exposed over the ~~sinus~~ and two ounces of thick foul pus was ~~removed~~ with a brain knife. The recovery was ~~not~~.

A study of a radiograph taken ~~at this time~~ operation with gauze in the abscess ~~was~~ compared with the first radiograph ~~was~~ with experience in interpreting ~~stereoscopic~~ graphs of the mastoid brain abscess ~~case~~.

ELMER J. FRIEDMAN

McBean G M Variations of Sphenoidal Disease. I Otol Rhinol Laryngol  
xxiii 4 9 By Surg. Gen. & J. H.

The points taken into consideration by ~~the~~ in studying the atypical forms of ~~sphenoidal~~ disease are the relations of the sinus (1) to the meninges (2) to the hypophysis (3) to the cavernous sinus and internal carotid artery (4) to the cranial nerves (5) to the other ~~sinuses~~ and (6) to the nasopharynx.

These structures become implicated ~~in the~~ in the following ways:

- 1 By extension of the infection
- 2 By exposure by necrosis of its bony wall or chronic suppuration
- 3 By invasion of the sinus from the nasal cavity — as by polypoid tumors
- 4 Irritation or paralysis of the oculomotor or trigeminal nerves or the carotid artery
- 5 Association with the ethmoid in acute or chronic infection polypoid atrophic rhinitis or atrophic pharyngitis

These conditions are illustrated by ~~the~~ reports from a study of which the author ~~has~~ following conclusions:

- 1 Sphenoidal disease is much more common than was formerly believed possible
- 2 With more careful postnasal examination especially with the nasopharyngoscope many cases will be discovered
- 3 With the routine use of the probe and catheter more cases will be recognized
- 4 The sphenoid is as a rule the source of the nasal sinuses to which it adheres

# SURGERY OF THE NOSE, THROAT, AND MOUTH

## NOSE

**Ingals, E. F.:** Nasopharyngeal Myosarcoma; Several Operations and Final Spontaneous Recovery  
*A. n. Otol. Rh. & Laryngol.*, 9 4, cxiii 373  
By Surg. Gynec. & Obst.

The author reports the case of a boy thirteen years of age with a growth filling the nasopharynx and right naris, so that the septum was crowded over obstructing the left nostril. The trouble was of three months duration. By repeated operation the growth was removed and the pathological report was small-celled myosarcoma. The growth was removed at various times by different methods during a period of several years.

Fourteen years later the tumor increased in size until the right cheek became very prominent, the vision was destroyed in the right eye and both nares were occluded. After two years the tumor began to atrophy spontaneously until the nares became free, although the prominence of the cheek and also the blindness of the right eye continued.

ELLEN J. PATTERSON

**Lothrop, O. A.:** The Use of a Section of the Scapula in Correction of a Nasal Deformity  
*Bull. A. M. & S. J.*, 9 4, cxiii 303

By Surg. Gynec. & Obst.

The author describes this method of correcting with a strip of bone from the scapula depressions of the nasal bridge with destruction of the supporting cartilage when the tip of the nose is depressed.

The technique of operation is as follows: Under ether anesthesia the submucous resection is done in the usual way in order to remove all obstruction to breathing. The patient is then turned on his left chest and through a three and one half inch incision made over the vertical border of the left scapula—cutting the muscles and being careful not to denude the bone of its periosteal covering—a strip of bone two inches long and about one fourth inch wide is removed from the free border with bone-cutting forceps and wrapped in wet sterile gauze. Through an incision in the under surface of the tip of the nose a subdermal passage is made in the nose-bridge extending to the distal extremity of the nasal bones where the periosteum is cut and elevated and the nasal bones ground down with a rasp. The graft is inserted under the periosteum until the end reaches the frontal bone and slight pressure is applied over the graft at its frontal end.

in order to hold it pressed against the nasal bones and stretch the contracting soft tissues of the tip.

ELLEN J. PATTERSON

## THROAT

**Witschler, W. A.:** Not the Faucial but the Lingual Tonsil  
*P. n. M. J.*, 1914 xii 866

By Surg. Gynec. & Obst.

Disease of the lingual tonsil is characterized by constant clearing of the throat and a persistent dry hacking cough, which is increased by physical exhaustion, overuse of the voice or dorsal decubitus, and should be differentiated from other diseases of the respiratory tract.

ELLEN J. PATTERSON

**Lynch, R. C.:** New Technique for the Removal of Intrinsic Growths of the Larynx.  
*Laryngoscope*, 9 4, cxiv 645

By Surg. Gynec. & Obst.

The author has modified the Mallin suspension laryngoscope and devised instruments by means of which he can dissect accurately ligate bleeding points, cover raw surfaces by sutures and do plastic work in the larynx with ease and accuracy.

For prolonged procedures and in children he prefers general anesthesia and for local anesthesia he uses cocaine in a 10 per cent solution dropped directly into the larynx and trachea. With the parts perfectly quiet he proceeds to dissect out the growth with angular knives removing it in one mass without disturbing the integrity of the cartilaginous box, thus avoiding the danger of secondary stenosis and lessening the chance of recurrence in malignant cases.

He reports several cases of papilloma and one epithelioma removed by this method in which no recurrence has occurred as yet the voice being restored immediately after the operation.

ELLEN J. PATTERSON

**Davis, E. D.:** The Importance of a Very Thorough Examination in Cases of Foreign Body Alleged to Have Been Swallowed or Inhaled.  
*Lancet*, Lond. 19 4, cxiii 493

By Surg. Gynec. & Obst.

The author cites eight cases to show the serious results such as bronchiectasis, pneumonia and death, which may result from delay or failure to recognize the impaction of a foreign body in the air food passages. To avoid these serious results, a thorough and adequate examination should be made with the aid of the X-ray and suspension apparatus.

Otto M. Rott

### Surgical Instruments and Apparatus

## SURGERY OF THE HEAD AND NECK

## Head

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## SURGERY OF THE CHEST

## Chest Wall and Breast

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